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THE  
Pacific Medical and Surgical Journal.

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Selections.

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[From the Cincinnati Lancet and Observer.]

Clinical Lecture upon Cerebral Fever.

BY TROUSSEAU.

Translated from "La Clinique Européenne," by J. C. REEVE, M. D., Dayton, Ohio.

I AM about to speak, to-day, of an infant which appeared doomed to a certain and almost speedy death. The disease from which it suffered, merits, in many respects, your most careful attention. It was a case of cerebral fever, which followed a regular course in its premonitory as well as its complete stage.

The patient was a little girl aged eight months, nursed by its mother. It was taken ill about six weeks ago, its constitution being good. At that time it presented a peculiar sad or heavy appearance, which was not usual, and which could not be attributed to dentition. The first group of teeth had been cut at the age of four months, and the superior incisors, the next to be expected, had not yet made their appearance, and would not probably do so within fifteen or twenty days, supposing the child lived that length of time. Dentition, then, could not occasion the illness which caused this heaviness, a symptom the importance of which I cannot too strongly impress upon you, and which, succeeding all at once to the liveliness and playfulness of

the child, surprised and troubled the mother. Its sleep became broken and unequal, but there was an absence of one symptom so frequently seen at the commencement of this disease; it had none of those startings from sleep, accompanied by a peculiar cry, which I shall have to describe in giving an account of this terrible affection. Eight days ago vomiting commenced. Everything which was given to it, drinks of various kinds, and its natural food, were thrown up again, and the mother became seriously alarmed. Her apprehensions were increased five days ago, by the appearance of another symptom, which she has well described to us, and which it is essential to mark. Whenever she took up the child it commenced to cry; it seemed as if every touch gave it acute pain; and this was the fact, for there was then general hyperæsthesia. Finally, four days ago, convulsions came on—first on the right side, then on the left; and then the little patient was brought here. Let us pass rapidly in review the symptoms which it presented, and compare them with those which may occur in other similar affections.

At first sight we observed *strabismus*—convergent strabismus of the right eye, the pupil of which was dilated, but not so widely as that of the left. Upon that side the child seemed blind, for upon moving the finger rapidly before the left eye, there was no closure of the lids, that natural and involuntary movement for the protection of the menaced organ. There was then blindness, or great feebleness of vision; and this is an accident of cerebral fever, which children who can talk complain of readily, and which is here very plainly indicated by the wide dilatation of the pupil, and the convergent strabismus of the other eye. We observed, besides, a slight bending of the head backwards, and some stiffness of the left arm, which was agitated from time to time with movements of extension and flexion. The thumb of this side was forcibly abducted into the palm of the hand and covered by the fingers convulsively flexed upon it; this flexion, however, yielded readily to our attempts at extension. Upon removing the child's clothing, we observed that the abdomen was excavated, hollowed out—a symptom almost constantly to be met with in cerebral fever, and of great value, as it serves, in a large number of cases, to distinguish the disease from cerebral affections occurring secondarily in other diseases—typhoid fever, for example. When the hand was carried to the face of the child, as I did to examine its mouth in regard to dentition, we were struck with the redness which immediately colored the skin. And if we passed the nail over the abdomen, however lightly, in such a manner as to make longitudinal and transverse lines, thirty seconds did not elapse before the whole surface was covered with a lively redness, which, diffuse at first, remained along the lines where the nails passed, of a more intense and persistent color. This is the cerebral blush, which I first pointed out twenty years ago, and which I have called the *meningitic blush*. This singular and inexplicable phenomenon is of great value, whatever may be said of it, and of great aid in establishing the differential diagnosis of cerebral fever. It is worth while to dwell on it a moment, for often this cerebral blush alone is of very great signification. The parts upon which it most readily appears are, first and before all others, the anterior face of the thighs, then the abdomen, and next the face. Its characteristics are those we have just pointed out in the case before us. In making light friction upon the skin of the little patient with the nail or with a pencil, we saw the points touched redden with remarkable vivacity. This redness persisted a longer or shorter period—eight, ten, fifteen minutes. The existence of this cerebral blush has not been denied, it is true, but the value which I give it has been strongly contested. It has been said that it is a sign of no importance, since it occurs in other diseases as well as in cerebral fever. This blush it is true, does sometimes occur in other diseases, but it is then accidental and exceptional, while in the complaint under consideration, it is a constant phenomenon, invariably occurring during the whole duration of the disease, from its

initiatory symptoms until death—a capital point as to its value in diagnosis. But a still greater objection has been made; it has been said that this blush can always be found, when sought for, in any child having fever, even of the simplest kind; but this is an error. I have pointed out to those following me in the wards, children suffering with fever accompanying violent stomatitis and severe pulmonary inflammation, and we have sought to produce this blush by rubbing the skin rudely, even to rubbing off the epidermis; the friction has caused a light redness, but this redness was not comparable either in intensity or persistence, with that seen after much lighter friction in cases of cerebral fever. The redness of the skin in those patients disappeared almost immediately; in the little girl it persisted eight, ten, fifteen minutes; and it not only occupied the points upon which friction was directly made, but extended several centimeters around, while in the other cases it remained perfectly localized to the points touched.

If I insist so much upon this sign, I repeat, it is because, in a great number of cases, it is one of considerable value, especially in avoiding the possible confusion between cerebral fever and other maladies, such as typhoid fever with cerebral complications, and the convulsions to which children are liable, and those which occur during the access of the exanthemata. This blush is never produced in these kinds of convulsions, and if ever seen in typhoid fever, it does not attend all stages of the disease, and never has the same intensity nor the same persistence.

I have dwelt upon this point to avoid repetition. Let us return to the other symptoms which make up the history of the disease.

The *precursory stage* is of very great importance. The writer who has insisted most strongly upon this period, is M. Rillet, of Geneva, the collaborator of Barthez in the work upon diseases of children. He has reported a large number of cases in which he was able to foresee an attack of cerebral fever from certain symptoms which I am about to indicate.

The first symptoms presented by a child about to be attacked by a cerebral fever is generally, but not always, a change of manner, which manifests itself during the month or six or eight weeks preceding the outbreak of the disease. The patient is sad and heavy, and takes less pleasure in its sports than usual; its *character changes*, it becomes morose and irritable towards its playmates and friends; at the same time a very perceptible *emaciation* takes place; it does not sleep so soundly as formerly, or there may be complete sleeplessness. In some cases the slumbers are disturbed by painful dreams, and broken by sudden startings accompanied by a peculiar cry which is characteristic of the disease. M. Rillet attributes these general symptoms to lesions of the brain which already exist, and which, although giving a chronic or subacute form to the malady, exercise, nevertheless, a certain and injurious influence upon the functions of the encephalon. When we recollect that we almost invariably find tubercular deposits in children who have died of cerebral fever, either in the bronchial or mesenteric ganglia—or, what is more rare, in the cervical—we can easily understand how this tubercular affection can occasion the general symptoms we have mentioned, and especially the emaciation. Further, as we most always find in these subjects, granulations occupying the periphery of the brain, the fissures of Sylvius, and other points—granulations which are, in truth, tubercular, as the microscope incontestably proves—we can conceive that the morbid action, under the influence of which these deposits are made, although taking place slowly, has nevertheless a decided influence upon the cerebral functions—an influence which is manifested by the change of character, by the agitated and broken sleep, and by the insomnia of which we have spoken.

Although the precursory symptoms more frequently precede cerebral fever than any other disease whatever, I do not think we can regard them as does M. Rillet, as exclusively characteristic of this affection. They appear



to me, indeed, to depend far less upon the local lesions than upon the general pathological state, which, preceding in this case meningo-encephalitis, precedes also in other cases, latent pleurisy, or tuberculous engorgement of the mesenteric ganglia, or in others, again, pulmonary or bronchial tubercularization. In a word, the precursory symptoms indicate rather a morbid diathesis than a declared disease. We know how much the character of a child changes under the influence of sickness, but few among ourselves have not learned by experience, that such a change takes place in adults, even under the influence of a light ailment, and the change takes place in children as much more readily as their characters are more mobile.

We can easily understand then, this sadness of the child, this unaccustomed repugnance to the sports of its age, this moroseness which is not habitual to it, without calling to our aid any local encephalic lesion. We have for their explanation the existence of a most grave, morbid state of the system—a tuberculous state not yet manifesting itself by local affections, but profoundly affecting the entire economy. I should say, however, that although these precursory symptoms occur in the other diseases mentioned, they are in no other cases so striking as in cerebral fever.

Finally, more decided symptoms of the disease manifest themselves. Most generally it is vomiting, and *uncontrollable vomiting*, which announces the commencement of cerebral fever. In the great number of cases, the friends of the patient look upon this symptom as of slight importance; and as the child has eaten but a few hours before, and perhaps even with good appetite, they consider it only as the effect of indigestion. During a day, or perhaps two, they remain of this opinion, but finding the vomiting persist, are compelled to abandon it. And in truth, it is very rarely that vomiting is repeated in indigestion after the stomach has once emptied itself. This persistence of the symptom is then a fact of great importance. When it occurs without febrile action in a child which has been vaccinated, our attention should be immediately directed to cerebral fever; occurring in one not vaccinated, accompanied with fever more or less severe and continuous, with profuse perspiration, diarrhœa, and pains in the loins, we should fear variola; but, I repeat, in the absence of these conditions, the vomiting described announces the commencement of cerebral fever. It should be added that there is generally obstinate *constipation*.

At the same time the patient complains considerably of headache; and although this is a symptom which strongly attracts the attention of the friends and the physician, it is a symptom which cannot be considered as of any great value in this complaint, for there are many other diseases which are attended by headache, more or less violent in proportion to the intensity of the fever. However, there is this peculiarity in the headache attending cerebral fever; it is rare that the *initiation-fever*, of which it is one of the epiphenomena, is limited, as in the other diseases, to a single accession; generally the patient has two or three chills in the twenty-four hours, and after each chill, some heat of skin and perspiration; sometimes the chill returns each day at about the same hour, in other cases, but more rarely, the fever is continued, but moderate, with frequent remission. The febrile movement, the violent headache, more or less limited to one part of the cranium, the moroseness of the patient, its sleeplessness, the persistent vomiting, are signs of capital importance. When the physician observes them, he should be carefully on his guard. It is not rare, even at this stage of the disease, to be able to discover more serious symptoms, amblyopia, hemiopia, etc.

Such are the symptoms of the first period of cerebral fever.

In the *second period*, to the sleeplessness, the febrile movement, and the violent headache, succeed a deceitful calm and repose, which is likely to tranquilize the uninformed physician, and above all to quiet the apprehensions of the parents, who are always ready to seize upon any favorable indications.

But the practitioner who has been taught by experience, informed by the symptoms of the preceding period which he has seen or been told, knows too surely that cerebral fever is established, that it has entered upon its *aporetic stage*, and that henceforward it will steadily pursue its fatal course. The pulse now shows a peculiarity; ordinarily regular in the first days of invasion, (I say ordinarily, for sometimes in the first period there is irregularity which gives valuable information to the physician,) it becomes now, in the second period, remarkably slow, at the same time unequal, but, above all, excessively irregular; while normally, in a child four or five years old, there are between ninety and a hundred beats per minute, and in an infant at the breast, from one hundred to one hundred and twenty, in the second period of cerebral fever the number of pulsations fall to sixty, sometimes fifty-five or fifty; and it may fall even below that, while at the same time it presents great inequality and irregularity.

At this time the child remains in a state of somnolence which contrasts singularly with the agitation of the first period. It enjoys, in appearance, a peaceful slumber, which rejoices and comforts the friends who surround it; but soon, seeing it prolonged, they become justly troubled and alarmed. This somnolence persists from four to five days. If the little sufferer is awakened, it utters a cry of impatience, and immediately drops asleep again; yesterday terrified at your presence, afraid of the physician whose examination harassed it, it no longer exhibits any alarm; then it could not endure even an examination of the pulse, the slightest touch agitated and tormented it,—now it appears indifferent to anything you may do; you open its eyes, you pinch it to discover the degree of cutaneous sensibility, and if it appears for a moment irritated, it drops immediately into its quiet slumber. This is a symptom of most serious character, and which we find in scarcely any other disease. About the end of two days, the countenance presents a strange appearance. From time to time the child opens widely the eyes; they are brilliant, and at that moment a bright redness overspreads the face, comparable to the blush which modesty sends to the cheeks of a young woman. This redness disappears in a minute or two, the eyes close again, and the child returns to its former state. This *reddening of the countenance* is repeated from time to time during the day; it is also of value. Soon it occurs more frequently, and in a great number of cases; when it takes place the child utters a few plaintive cries,—a characteristic phenomenon which Coindet has particularly pointed out; this is the *hydrocephalic cry*, the cry of cerebral fever; it may be repeated every hour, every half-hour, or at much greater intervals. It is a cry of pain, and the patient having uttered two or three of these, falls again into the calmness and into the sleep from which its sufferings had for a moment roused it. This peculiar appearance of the countenance and the hydrocephalic cry completes the description of the second period, with the exception of one sign of which it is necessary to speak. I allude to *retraction of the abdominal parietes*. The abdomen is hollowed out, and this fact is especially important in establishing the differential diagnosis between the disease under consideration and typhoid fever, a disease in which the abdominal parietes are always protuberant.

One other symptom, however, must still be mentioned; it has struck those who observed the little girl who is the subject of the present lecture. I refer to *irregularity of respiration*. It was well marked in our patient, as I have said, but less so than in many others I have seen. How did she respire? In counting the respirations, watch in hand, there was extreme difficulty in following them; first, there was a feeble inspiration followed by a feeble expiration, then a stronger inspiration and expiration, and again a feeble one, and finally a period of cessation. These four respiratory movements were accomplished rapidly, and the chest remained motionless afterwards during three, four, five, and six seconds. That is what occurred yesterday; that i

what occurs to-day ; to-morrow, in place of an interval of five or six seconds, there will be one of ten, twelve or fifteen.

In a child of two years, in the Hospital Necker, afflicted with this disease. I was able to count by the watch, periods of cessation of respiration of thirty, thirty-five, forty, and even of fifty-seven seconds ; and it is remarkable that this irregularity of respiration extends to the third period of the disease, when the slowness of the pulse has been succeeded by great frequency—this infrequent respiration occurs with a pulse beating, as in the case of our little patient, as high as one hundred and sixty per minute. In no other disease can this singular anomaly be found ; this unequal respiration does not occur in the idiopathic convulsions of infancy, nor in typhoid fever,—so that in cases where we hesitate in making a diagnosis, and these cases are still too frequent, this fact, in addition to the cerebral blush upon which I have so strongly insisted, should have a great significance. It is of importance in view of diagnosis, but it is far more so in regard to prognosis—and for this reason : the termination of cerebral fever is almost always, if not always, fatal. In the course of a long medical career, I have never but twice seen recovery take place. Once it occurred under my own care, in the children's hospital, where we were able to verify the fact by an autopsy. There seems a contradiction between the words *recovery* and *autopsy*, which may require an explanation, and this can be easily given : the acute disease had subsided, but was followed by a serious chronic affection, which terminated the life of the patient five months afterwards. My *interne* presented to the Society of Anatomy, the brain, which had evidently been the seat of softening four or five months before.

The other example of a cure was in a child I saw in Boulogne, near Paris, in consultation with M. Blache. These two children are the only ones, I repeat, which I have had the good fortune to see recover in a long practice. It shows how serious is the disease which furnishes such results ; to me, its incurability seems nearly absolute. You can comprehend, then, of how much import the question of diagnosis must be when it is impossible to form a prognosis without it ; and here prognosis is of vital importance. We must distinguish from cerebral fever, typhoid fever with cerebral complications, and the idiopathic convulsions of infancy. We cure, in fact, the greater number of young subjects attacked with typhoid fever, even when it is of the most grave character—even when accompanied by serious cerebral complications ; and we cure ordinarily the convulsions of children. But if we do not make the distinction—if we take for cerebral fever diseases of which we have just spoken, (and typhoid fever may easily be confounded with it,) we shall imagine that we have cured many cases of the disease, and be astonished at hearing practitioners of great experience avow that they have never been fortunate enough to save a single one.

The *third period* of cerebral fever is characterized by a *return of the febrile movement*. We have seen the fever of the first period occurring in paroxysms of short duration, several times repeated in the twenty-four hours, or continued, but moderate, and with frequent remissions. In the second period of the disease, the pulse, on the contrary, was remarkably slow ; in the third period, it becomes extremely frequent, and this frequency goes on increasing until death terminates the case. It is at the same time sharp, and the skin is warm, but it is singular, and the fact is of value in the diagnosis, that the thirst which generally attends fever of this kind, does not exist in the disease under consideration. While children, suffering from cerebral complications in typhoid fever, from scarlatina, from any other pyrexia, or any inflammation, demand drink eagerly, or if unable to talk, make known, by certain pantomimic actions, the thirst which torments them, nothing of the kind is seen in patients attacked with cerebral fever. There is no thirst, or, at least, no evidence of any is given. Not only do the little patients not

ask for drink, but when it is offered they manifest repugnance to it. Does this repugnance arise from the difficulty of deglutition experienced by them? This may be; but whatever the explanation, the fact is the same.

Already in the second period, a symptom had made its appearance which, although present then, is of course much more strongly marked in the third. I allude to the *state of depression* into which the patient has fallen. Completely indifferent to what passes around it, it observes nothing, is disturbed by nothing; everything which pleased it formerly, its toys, the amusements of its age, are now unnoticed, and it lies in a state of complete immobility; sometimes it responds when spoken to, but never asks questions of its own accord; while in every other disease, it will call for its mother, its nurse, and those it is accustomed to see, manifesting in a word desires, in cerebral fever it seems to have no spontaneous ideas and no wants. In the first period of the disease, we can awaken the patients by disturbing them. They complain and cry upon being irritated; but in the third period this is no longer the case—nothing rouses them from their deep depression.

Convulsions are sometimes, but rarely, observed at the commencement of the disease; in the second or apyretic period, there are none, properly speaking, but there is something resembling them—something analogous to the epileptic vertigo; the child opens its eyes quickly, and they remain singularly motionless. This convulsive movement manifests itself more decidedly in the third period, and then also appear symptoms of *paralysis*, which in some cases occur towards the end of the former stage. Thus, when our little patient opened its eyes, one of them was much more widely opened than the other, for the levator palpebræ began to be sluggish; there was also strabismus. These symptoms indicated clearly that paralysis was commencing, and an attentive examination showed that it had already extended to other parts of the body. In an infant, we can establish this fact by laying it upon its back and tickling alternately the soles of its feet: it draws back one foot much more readily than the other; the power or motion is impaired upon one side, sensibility is also less, and a greater stimulus is required upon this side to produce the same effects. The parents will tell you, besides, that their child allows one arm to lay along by its body more than the other, and if you examine this member you will find motion, power and sensibility more or less affected. The paralysis of cerebral fever has this peculiarity about it; it appears to be variable. I will explain what I mean; one day you ascertain the fact that upon tickling the soles the child withdraws one of its feet more readily than the other; some days afterwards, in repeating the experiment, you find that it is no longer the right leg, for example, which it moves more easily, but the left. It seems, and let me repeat the word, it *seems* as if the paralysis had ceased upon the right side and passed to the left; but this is not so. The member primarily paralyzed remains so, but the paralysis not increasing, it retains the movements which you have seen executed more feebly than upon the healthy side; but the other side, healthy until now, is paralyzed in its turn, and the stroke being more severe than upon the side first affected, sensibility and power of motion are almost abolished, and it seems now alone affected, while in truth the other is also paralyzed, but in a less degree than the second.

The lesions which we find afterwards at the autopsy give an explanation of this fact; for if the paralysis has remained limited to the right side, the cerebral lesion is found only upon the left side, while if the paralysis has seemed to pass from one side to the other, there are cerebral lesions upon both sides, but more marked upon one side than upon the other. I have thought necessary to dwell upon this peculiarity of the paralysis in this affection, for, in my belief, it is seen only in cerebral fever.

Let us return to the *convulsions*. Rare in the first period, occurring in the second only in a modified form and resembling epileptic vertigo, in the

third period they make their appearance, first in the form called *convulsions internes* [*inward fits*, in the common language of this country,] afterwards increasing to attacks of general eclampsia. If we observe closely a child in this stage of the disease, we see at certain times its countenance is distorted, and its jaws move mechanically as if chewing, while its thumb and fingers are flexed into the palm of the hand; to this stiffness complete relaxation succeeds; there has been a true tonic convulsion of certain classes of muscles, and not one alternately tonic and clonic as in general attacks implicating the muscles of the extremities. These are the internal convulsions, having a duration of eight, ten, twelve, or fifteen minutes, during which the eyes are turned upwards and inwards, and agitated by slight oscillations. The diaphragm and the muscles of the glottis may be seized with these convulsive movements, and then the patient is suffocated—respiration can no longer be performed.

As the disease approaches its fatal termination, *general convulsions* come on, and generally death occurs in one of these attacks; they are repeated every hour or every half hour, and the patient dies in a state of demi-asphyxia, as in epilepsy.

The convulsions are a prominent symptom of the third period of cerebral fever; but in this stage another accident also takes place. The patient fallen into a state of deep drowsiness, closes the eye-lids but partially; the eye being insensible, the cornea remains exposed to the air, the act of winking is no longer performed, the eye dries, the conjunctiva inflames, and then you observe a deep suffusion of the membrane at the same time that the edges of the lids become bleared. This is also seen in other grave diseases, (typhoid fever, for example,) and it is an accident to which I have often called attention, and which I made the subject of a note published in the first volume of the *Archives Generales de Medicine* for the year 1856.

The termination of this disease is, as I have already said in the course of this lecture, always fatal, for the exceptions of this rule are so rare, as not to be worth mentioning.

After so sad a prognosis, I should have little to say upon the subject of treatment, since whatever we do is in vain. Nevertheless you have seen me resort to remedies in the case of the little child whose case we are considering. I instituted treatment, not with the expectation of rescuing it from its fate, but to afford some consolation to the mother. Is it not in fact cruel to say to a mother who calls you to her child, or if not to say it in words to indicate by your actions, that medicine is powerless, and that her child is doomed to certain death? Although, therefore, the physician, instructed by long experience, is unable to see a glimmer of hope, he should act, he should undertake the case, and apply all the means at his disposal to sustain the courage of a family which implore him for aid, and not leave them to bitter regret that nothing was done to save their child.

For a long time I have employed everything in the treatment of this disease, everything extolled by others, everything which, upon my own part, I had been able to imagine. I have given calomel in large doses, and I have given it in minute ones; I have had recourse to drastic purgatives and to sedatives; I have administered the iodide of potassium as recommended by Otterburg; I have applied large blisters to the head, I have applied ice and cold effusions, and never, except in two cases, have I seen the disease retrocede, and in those two cases I am confident my remedies had nothing to do with the result. Farther, at the Children's Hospital I have treated the patients comparatively, some energetically and some upon the expectant plan, and I must say that the fatal event followed more rapidly in the former than in the latter. Now, therefore, I feel obliged to pursue a course of medication far from energetic, and designed, I repeat, rather to afford consolation to the parents than to act against a disease which I consider invariably fatal.

Thus you have seen me give our little patient musk and syrup of ether, and nothing else. In other cases, you may try anti-spasmodics, or the mercurials in small doses; but remember, the prognosis must nevertheless remain the same.

It suffices to see the lesions produced in cerebral fever, to comprehend why the prognosis should be as I have said. Our little patient died, and these are the pathological conditions found at the autopsy: considerable softening of the cerebral centres, of the fornix, of the corpus callosum, of the median septum and floor of the ventricles; these cavities contained a certain quantity of slightly turbid serum. About the chiasm of the optic nerves, behind the decussation, a fibro-plastic, *purulent* infiltration was seen in the thickened membranes. This infiltration did not exist in the interlobular fissures, where it is usually observed, and what is also very rare, there were neither *granulations* on the surface of the hemispheres nor *tubercles* disseminated through its substance. Neither were there any in other organs where they are almost constantly found—none in the mesenteric ganglia, none in the lungs, none in the bronchial glands; and yet of thirty infants dying of cerebral fever, twenty-nine will present tubercular lesions, of which, in this child, there is not a trace.

This proves once more, that cerebral fever runs the same course and has the same characteristics in children not tuberculous as in those who are so. Because we find granulations in the encephalon of the latter, it does not prove that those granulations were the cause of the encephalo-meningitis. They do not cause it any more than do the granulations of the pleura cause tubercular pleurisy; far from having caused the inflammatory disease, they are themselves developed under the influence of inflammation. If, therefore, I refuse to cerebral fever the name of meningitic, it is because I consider the inflammation of the meninges to be only of secondary importance. The lesions of the cerebral envelopes are of very far less importance than those astonishing lesions which are always found in the brain itself, that softening which destroys the fornix, the septum lucidum, the corpus callosum, the optic thalami and the posterior portions of the lobes of the cerebrum. Cerebral fever is therefore for me an encephalo-meningitis.

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[From the Journal für Kinderkrankheiten, Nos. 1 and 2, 1839.]

### Influence of Sex on Children.

THAT sex exercises a decided influence upon diseases and their course long before the development of puberty, is well evinced in early infancy. It is one of the important tasks of pathology to study this phenomenon more closely, to establish the facts having relation to it by accurate statistics, and to find out, as far as possible, the real cause of the same. Dr. Kutzer's treatise is a valuable contribution toward the solution of this question, as his statements are founded upon the statistics of ten thousand cases treated in the Children's Hospital of Dresden, during a period of over ten years. Referring our readers for particular data to the treatise itself, we only give the conclusions which the author lays down as the result of his statistical researches. They are as follows: 1. Boys are, particularly in the first year of their life, much more liable to diseases of the digestive organs than girls; they bear therefore an improper mode of feeding less easy, and die; the relative mortality of both sexes being equal, in an absolutely greater



number of diseases of this kind. 2. Nervous and cerebral diseases are, especially from the fifth year, nearly twice as frequent in boys as in girls. 3. Boys are more disposed to umbilical and inguinal hernia than girls. 4. Girls, after their third, and particularly after their fifth year, are more inclined to diseases of the respiratory organs, and die of them in greater number. 5. The same is the case in regard to diseases of the heart. 6. In acute diseases of the blood the difference of sex does not seem to exercise any influence; chronic anæmia, however, and scorbutic cachexia, are much more frequent in girls than in boys, especially after the eighth year of life, (in the proportion of ten to one.) Scrofula and tuberculosis are, at the beginning, nearly equal; but from the fifth year pulmonary tuberculosis is more frequently met with in girls. Rachitis occurs in equal number in both sexes, but is often somewhat later developed in girls, and is of longer duration in them than in boys. 7. Chronic diseases of the skin (particularly of the scalp) are, after the ninth year, more frequent in girls than in boys. 8. The same is the case in regard to swellings of the thyroid gland.—*The Druggist*.

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[From the Journal de Chim. Med.]

### New Reagent for the Alkaloids.

BY M. SCHULZE.

WHEN chloride of antimony is poured drop by drop into a solution of phosphoric acid, a liquid is obtained which produces, with the ammoniacal salts and with the most part of the alkaloids, precipitates analogous to those formed by the phospho-molybdinic acid of Sonnenschein.

*Strychnia*.—Solution of the nitrate one part to a thousand, abundant yellowish curdled precipitate; with five thousandth, white flocks; twenty-five thousandth, light cloudiness.

*Brucia*.—Solution of a thousandth part of hydro-chlorate, rose colored precipitate soluble with heat, reformed on cooling, leaving the liquid colored carmine red; with ten thousandth, cloudiness, and rose coloration of the liquid.

*Quinia*.—Thousandth part, flocculent precipitate more clear than that of strychnine; five thousandth, liquid becomes opalescent.

*Chinchonia*.—Thousandth, blush flakes; five thousandth, light cloud.

*Veratric*.—Thousandth, dirty-white flakes; five thousandth, opaline cloud.

*Narcotina*.—Thousandth, abundantly yellowish flocculent precipitate; five thousandth, cloud; twenty-five thousandth, cloudiness still perceptible.

*Morphia*.—Thousandth gives no reaction.

*Codeia*.—Thousandth, cloud of a dirty brown.

*Nicotina*.—Two hundred and fiftieth, light cloud.

*Conia*.—Two hundred and fiftieth, slight opalescence.

*Piperine*.—Yellow coloration even much diluted.

*Atrophia*.—Thousandth, white curdled precipitate dissolved by heat, separated again completely by cold; five thousandth, light cloud, rendered more definite by long ebullition.

*Digitalin*.—Thousandth, light cloud, which is at first dissipated by boiling, and afterwards forming an abundant precipitate.

*Aconitina*.—Thousandth, abundant white precipitate; five thousandth, cloud; twenty-five thousandth, slight opalescence.

*Cafein*.—Thousandth, no reaction.

*Theobromin*.—Thousandth, slight cloud.—*The Druggist*.

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[From the Journal de Pharm. et de Chim. from New Reperto. sur Pharm.]

## Physiological and Toxilogical Researches on Arsenic.

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BY M. SCHROFF.

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Is metallic arsenic poisonous? Does arsenical cobalt, deprived of arsenious acid, comport itself like a poison? These somewhat controverted questions are resolved affirmatively by the author, according to experiments executed upon rabbits.

The poisonous matter, free from the arsenious acid, was administered in the form of boluses prepared with gum arabic; with six decigrammes of arsenical cobalt the symptoms of poisoning were promptly manifested, and death supervened at the end of two hours.

The mucous folds of the stomach were notably inflamed where they were in contact with the metallic particles, and above all, in the place where the mucous gave an acid reaction.

The urine was manifestly arsenical. The toxical phenomena are nearly the same for arsenic and arsenical cobalt; a decigramme of the latter produced death at the end of a few hours, the same of metallic arsenic; in comparing the action of these two substances with that produced by an equal weight of arsenious acid in powder, the author has recognised that the poisonousness of the two first is greater than that of arsenious acid.

The contrary is the case when this acid is employed in a state of solution; and notwithstanding the local inflammation caused by the former is much greater. As to the antidotes the author has observed their efficiency in the case of poisoning by poison administered in the solid state. Their effect is null or insignificant when the toxical agent has been taken in a state of solution.

M. Schroff has extended his researches to the action of Schweinfurth green, and to that of pure arsenite of copper, and he has recognised that the poisonous effects are nearly the same for both. Further, the symptoms during life and after death, are those of poisoning by arsenic.

In the two cases this substance is found in the urine.

The local actions manifest themselves particularly in the stomach; their result resemble the effects produced by a violent gastritis.

The arsenite of copper is less deleterious than arsenious acid in equal doses.\*

A rabbit resisted perfectly one decigramme of the former; the same dose of arsenious acid in solution caused it to succumb in a short time. It is the same with metallic arsenic, and arsenical cobalt, and arsenite of potassa.

Rabbits have resisted perfectly one decigramme of arsenite of copper, and five centigrammes of arsenical cobalt.—*The Druggist*.

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\* Perhaps because this arsenite was administered in the solid state. Has not the author himself remarked that solid arsenious acid is much less active than the same acid in solution? This difference of action will probably give the key to many of the contradictions on the subject of the toxical effect of arsenical preparations. Hereafter, it will not suffice to indicate the dose in which the medicament has been employed, it is also necessary to make known under which it has been given.—J. N.

From the Med. Cent. Zeitung, and N. A. Med. Chir. Review.

### Easy and Certain Cure for Facial Neuralgia.

BY DR. BURDACH.

DR. BURDACH recommends corrosive sublimate as a specific, never-failing remedy, in cases of facial neuralgia. He has used it for more than thirty years, and always obtained a prompt and certain cure, no matter how severe a form the disease had assumed. The formula he employs is the same which he recommended in *Hufeland's Journal* for 1826 and 1830, in the treatment of rheumatic gout. It is the following:

R. Liquor. hydrarg. bichlorid. corrosiv. (Pharmac Borus), oz. jss.;  
Vini semin. colchici, - - - - - oz. ss.  
M.

S. Thirty to sixty drops every two hours.

Cases requiring the latter dose were extremely rare. (The Liq. hydrarg. bichlorid. corros. of the Prussian Pharmacopœia contains corrosive sublimate and hydrochlorate of ammonia, one grain of each to the ounce of water.) Each dose of the medicine should be followed by a draught of the species ad decoctum lignorum, (the species ad decoc. lignor. consists of guaiacum wood, two parts; lappa and saponaria, one part of each; liquorice root and sassafras, half a part each. One ounce of this mixture is used to a pint of water.) There is about one-thirtieth to one-fifteenth of a grain of sublimate given in each dose, a quantity which is generally well borne by the patients. In order to assist the cure, Dr. Burdach sometimes ordered the local application of veratria ointment, but in the generality of cases it could be dispensed with, as the sublimate acted promptly without it. In very sensitive patients, acetic acid, chloroform, or tincture of opium, might be added to the given formula; such an addition, however, is not to be recommended.

To obtain prompt action of the remedy, it is absolutely necessary to give it in fluid form, and at the intervals prescribed above, for in the form of pills it seems to exercise but little control over the disease.

From the Boston Medical and Surgical Journal.

### Mortality, etc. of European Cities.

BY C. F. WINSLOW.

IN point of health, Paris is the fourth city in Europe—the order of the smaller average of mortality in the principal cities being as follows: London, 1 in 42 per year; Madrid and Moscow, 1 in 35; Paris, 1 in 30; Copenhagen, Naples, Dresden, Amsterdam, Stockholm, Vienna and Venice, ranging from 1 in 22 to 1 in 27. The difference is largely in favor of London; and with the exception of Nos. 2 and 3, no great difference exists in the other eight. The different countries do not follow exactly the same order as their capitals, for I find the following order: England, Sweden, Belgium, France, and the balance tolerably regular. England and London, France and Paris, maintained, however, their relative positions, the former being about *one-fourth* more healthy than the latter. If the statistics, taken from the official

documents, are worth anything, they must certainly show that, for some reason or other, bright, fashionable, pleasure-producing Paris is nearly as destructive to human life as Naples with its rags, filth, lazaroni and earthquakes; and smoky, dingy, sooty London, the healthiest city in Europe, if not in the world. I have been astonished, *am* astonished at the result of my examinations; and had I drawn this information entirely from *English* sources, I might have doubted the figures. But the official documents of Paris, and the works of Foissac ('*De l'Influence Climats des sur l'Homme,*') exactly conform to English authority, so that the truth of the tables is beyond doubt.

With regard to the quantity of rain, the number of days on which rain falls, and the average temperature of London, Paris, and some other cities, I find the following the result of *fifty years'* observations :

London, cubic inches of rain per year, 24.80 ; Paris, 18.62 ; Rome, 31.17 ; Nice, 26.81 ; Florence, 31.68 ; Naples, 29.09 ; Genoa, 51.63 ; Venice, 32.09 ; Brussels, 17.92 ; Geneva, 28.00. I introduce this table to show that London is much *less* rainy than most other cities, although of a damp atmosphere, and *usually* considered a very *wet* place. In fact, there are but two or three cities in Europe that have less rain than London. The number of days on which rain falls, and the average standing of the thermometer, are as follows :

	<i>Rainy days.</i>	<i>Mean temperature.</i>
London, - - -	152	50.39 Fahr.
Paris, - - -	152	51.20 "
Rome, - - -	106	60.70 "
Nice, - - -	94	59.48 "
Florence, - -	120	59.00 "
Naples, - - -	107	61.40 "
Genoa!! - - -	189	69.37 "
Venice, - - -	117	56.25 "
Brussels, - -	76	not given.
Geneva, - - -	102	48.50 Fahr.

From this table it will be seen that no great difference exists between London and Paris. I have noted London and Paris, in particular, for the reason that in one of these cities, or in its vicinity, I shall spend the coming winter.

### Decline and Evils of Homœopathy.

SCIENTIFIC physicians have always maintained that the dogma "*similia similibus curantur,*" and the doctrines of Hahnemann, were neither founded upon fact nor in accordance with philosophy, but, on the contrary, were in direct antagonism to both truth and common sense; and experience has amply demonstrated the correctness of these premises. Reason and observation have thus shown that homœopathy is not only false in theory, but, moreover, negative in practice, and, indirectly, positively injurious. The progress of knowledge has made these facts so apparent as to force many of its former supporters to discard it altogether, and to oblige those less reasonable to confine its applicability to very narrow limits, and compel those less honest to a surreptitious resort to scientific medicine in order to maintain its failing status.

The practical inefficiency and injurious tendencies of homœopathy in its various phases, have now, however, become so palpable as to compel its strongest adherents to notice them. Thus, in the August number of the

*American Homœopathic Review*, the leading homœopath of Philadelphia and one of the most noted of the sect in this country, Dr. Constantine Herring, voluntarily acknowledges to the "rapid going down which has become apparent of late years," and, moreover, confesses to the evils entailed upon humanity by its adherents, and this, too, notwithstanding their reputed increase in numbers and the expansion of their so-called materia medica. With regard to the results of their treatment he says: "We take as granted and admitted by the majority of the leading men, as a uniform observation made in Germany, as well as in France and in England, and here long ago, that in general the success of homœopathists in our days is inferior to that of the early homœopathic practitioners." He also states that "the introduction of Drs. Drysdale and Atkin" to the *British Homœopathic Repertory* "contains the remarkable concession: *our success is inferior to that of the earlier homœopathic practitioners; it must be admitted, that our practical gain has not been equal to the extension of the materia medica,*" and adds, in commendation of this confession, that "such a candid, upright, and noble acknowledgment deserves the greatest praise." In relation to the evil effects of homœopathy he says: "We all know that the numbers in our homœopathic ranks are not lessening, but it is the general observation, that the number is, year after year, increasing, who, instead of deriving benefit from homœopathy, are made incurable by so-called homœopathic practitioners."—*Den. Cosmos.*

### Mercury.

LOOK HERE UPON THIS PICTURE.—Mr. Syme, in his "Elements of Surgery," makes the following remarks concerning the treatment of iritis:

"In the treatment of iritis, the ordinary means of depletion are found to be insufficient for arresting the morbid process. The pain and fever may be thus diminished, but they are not removed; and the effusion of lymph proceeds as if no attempt had been made to control the disease. The grand remedy for it is *mercury*, given so as to affect the system; and if this be done early, while the usual measures for subduing inflammatory action are at the same time employed, and there is no local irritation present, there is almost a certainty of affording a speedy and effectual relief. It is well ascertained that the constitutional action of mercury is the most powerful obstacle to effusion taking place, and exerts the strongest influence in promoting the absorption of lymph which has been thrown out."

AND ON THIS.—Mr. John Hughes Bennett, of Edinburgh, says:

"As to mercurials, the confident belief in their power of causing absorption of lymph, by operating on the blood, is not only opposed to sound theory, as formerly explained, but, like blood-letting, is not supported by that experience which has been so confidently appealed to in their favour. They have been most praised in the treatment of serious inflammations and in iritis. But recent careful observation has demonstrated that the moment these diseases are treated without mercury, they are uninfluenced (except in certain case for the worse) by this drug. Thus, from an analysis of 40 cases of pericarditis, recorded with unusual care by the late Dr. John Taylor, only four appear even coincidentally to have benefitted in any way. And of 64 cases of iritis, of every degree of severity, including its idiopathic, traumatic, rheumatic, and syphilitic varieties, treated without mercury, by Dr. H. W. Williams, of Boston, U. S., the results—with four exceptions, which were neglected at the commencement—were perfectly good."

From the New York Medical Press.

### Pericarditis--Enlargement of Liver--Degeneration of Kidney.

DR. BAUER presented the specimen of a heart removed from a German merchant. The patient had been unwell for a considerable length of time, had complained of asthma, showed a bronzed discoloration of the skin, and was at last attacked with dropsy and died. He changed his physicians so often, that no one was able to get much of a history from him. The two physicians for whom Dr. B. made the post mortem, were only in attendance for the two weeks before his death, and during all that time the patient's condition was so much enfeebled that no satisfactory examination could be made. The bronzed skin, however, created a suspicion that there was something wrong with the supra-renal capsules. Beside the skin, the sclerotic coat and finger nails were tinged.

From that circumstance, Dr. B. was satisfied that the hue of the skin, etc., was due to icterus peculiarly modified by the difficulties in respiration. The heart was found to be closely adherent to the pericardium. There had been pericarditis a good time previous to his death, and from the condition of the valves, it could be inferred almost with a certainty that there had been also present a slight degree of endocarditis. The organ itself was very much increased in size, the ventricles being four or five times larger than natural. The lungs were healthy with the exception, that at a few spots emphysema showed itself, which evidently had been produced by laborious coughing.

The liver was enlarged and congested. There was also some degeneration of the kidney. His urine had been prevented from free discharge by some mechanical cause, and as a consequence the ureters were somewhat dilated. The condition of the liver convinced Dr. B. that it was inefficient in its action, in removing the elements of bile from the blood, and the passive congestion consequent upon the difficulty in respiration, modified the yellow tinge to a bright hue. He remarked that there were a great many cases recorded where this bronzed skin existed, and there was no disease of the supra-renal bodies, and *vice versa*.

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(From the New Orleans Medical News and Hospital Gazette.)

### Fees for Medical Services.

IN the last number of the *North American Medico-surgical Review* we notice a very interesting editorial on the subject of fees for medical services, the perusal of which would do good, if the article could be brought before the popular eye. While many liberal minds will condemn the man who degrades himself and his profession by underbidding all his brethren around him for the sake of "getting into practice," no liberal mind can for one moment object to the course of the medical man, who, having attained eminence in one or more branches of medicine by strenuous and honorable exertions, demands more liberal compensation for his superior services. We have always been at a loss to conceive why the medical man who labors to achieve superior skill should not be entitled to higher rates of compensation, if he chooses to demand the same. In this respect place him only on a level

with the drone, and you strike a direct blow at the very noblest of enterprises, for it is but human (and indeed, but right,) to feel that greater exertions are to meet greater rewards. Does the lawyer of eminence work for \$5 fees? Does the tailor who has acquired the reputation of making "a good fit" and doing good work charge the same prices as his fellow-tailor who has no reputation? Aye, does the eminent divine, whose mission on earth is the saving of men's souls, preach for the same price as the so-called "saddle-bags preacher?" Or, will this community, for instance, be willing to pay the latter the same price as the former? And, unless the community positively acquiesced in the superiority of these different individuals, could any one of them demand such increased pay? These questions answer themselves in terms which must carry conviction to the hearer: of the medical laborer that his increased skill and increased knowledge are entitled to increased pay. What the limit of that pay is to be, only his own sense of propriety can determine. Let him show himself lost to propriety, in his too great zeal to acquire money, and the community will regulate him by reducing his patronage. It is one of the distinguishing characteristics of medical men that they are ever as ready to serve the poor as the rich; more than any other men are they willing to work without money and without price; but he or she who is able to pay the full value of services received at the hands of him who has rendered himself most capable of dispensing the same, must expect to pay. Had such a person his or her pecuniary all at stake, he or she would seek aid at the hands of the most eminent counsel, and without regard to cost; but the poor man's all may be at stake, and the cost necessarily drives him from such counsel; he must seek one more obscure if not less able—one who will charge him less for the service rendered. Why, then, shall the eminent physician or surgeon be forced to charge so much per visit or consultation, and rich and poor alike; or why shall he be restricted to prices for his superior services claimed as readily by the merest tyro or drone in his profession? There must be much of pleasure in the reflection that he has reached a point of true eminence in his profession, but the exertion to realize that reflection will always be greater if the laborer knows that his pecuniary reward is to be in just proportion. Such is one of the demands of human nature.

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From Bennett's Clinical Lectures.

### **The Influence of Predominant Ideas on the Healthy and Disordered Functions of the Body.**

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DR. HENRY MONROE, speaking of Monomania, says that "in these cases neither the controlling agency of the will nor the reason is suspended on most subjects, though it is on certain points; these people can guide their thoughts well enough on most questions, can see the full relations that cause bears to effect, and that mental impressions bear to external things, but they cannot properly control those impressions which are most strongly fixed on the mind. This state has very frequently a stage of contest and conscious difficulty at first, when the struggle between the morbid impressions and the faculties by which to control them is great; indeed, we may say that all morbid and excessive impressions which exclude all other considerations bear the rudimentary form of this affection, though insanity cannot be said strictly to be fully developed until the contest is decided by such a victory on the part of the morbid impressions that the moral liberty to exercise their reasoning faculties on these subjects is gone."

Now, the first stage of the process here so accurately described, viz : that in which certain persons cannot control those impressions which are most strongly fixed on the mind,—may be produced artificially in about one out of twenty individuals of the entire population. Thus, if that number of persons be chosen indiscriminately, and directed to gaze steadily at any object for about ten minutes, a peculiar condition of the cerebral functions is produced in one or more (especially if they be young), in which those affected may be made, not only to act upon any train of ideas which may be suggested to them, but motion and sensation may be influenced in a variety of ways. It seems as if the mental faculties were fatigued, in consequence of which they lose the power of controlling any idea that becomes predominant.

The peculiar mental condition thus produced manifests itself while the individual is gazing upon the object, in the first instance, by a mistiness of vision, succeeded in some by a feeling of lassitude and desire to sleep, in others only by stiffness of the eyelids, and in a third class by deep-drawn sighs, hurried respiration, heaving of the chest, or other signs of general excitement. If now such persons are repeatedly told in a confident manner that they cannot open their eyes, it will be found that they cannot do so, especially if their attention be more strongly directed to the eyelids by touching or pointing to them. But on receiving permission, or on being commanded to open them, this is done at once.

In the same manner, an individual so affected may be made to make every conceivable kind of motion against his will, or, on the other hand, such movements as he may wish to make can be impeded, arrested, or perverted. Thus, I have seen a person unable to speak, from inability to open the jaws ; not able to bend an arm or leg ; fixed to a chair, or prevented from sitting down ; unable to approach a particular object, or irresistibly impelled towards it ; unable to cross a real or imaginary line on the floor ; the arm suspended and fixed in the act of drinking, or the body arrested in the act of dancing ; the individual made to walk, dance, or run, as directed ; to imitate riding on horseback, when seated on a chair ; or to stagger about the room in a supposed state of intoxication, etc. Many of the lower animals also appear to be susceptible of being impressed by what strongly arrests their attention, in such a way that they are rendered incapable of voluntary motion, or irresistibly impelled towards the object. Hence, the long, glittering bodies of serpents, or the glaring eyes of other animals, fascinate birds and small quadrupeds, and render them an easy prey to their enemies. Similar effects are produced in individuals who look from heights and precipices, and experience an uncontrollable desire to leap down, although it be to certain destruction.

In like manner, during this condition all the sensations may be increased, perverted, or destroyed, through the medium of suggestive ideas communicated to the mind. By fixing attention on any part of the skin it may be made to feel hot or cold, tingling and painful, or benumbed and destitute of sensibility, according to the ideas communicated. Sight may be lost or rendered painful, spectral images may be presented to the vision, or various objects made to resemble others to which they bear no analogy. Smell also may be perverted, and any kind of odour given to inodorous substances. A rose, in the mind of such an individual, may have the smell of an onion, and plain water the fragrance of *eau de Cologne*. Various noises, in like manner, may be heard ; hearing is frequently very acute, at other times it is apparently abolished. Lastly, the taste may be affected, and plain water made to present to such a person the sweetness of honey, the bitterness of worm-wood, or the acidity of vinegar.

Then, as regards the mental faculties, memory may be lost, whilst judgment and comparison for the time being cannot be exercised. The imaginative faculties, on the other hand, are vivid, so that the individual



readily assumes the manners of other persons in various walks of life—goes through the operations of different mechanical trades, conceiving himself to be an artisan—endeavors to escape from imaginary dangers or tries to repel them—and acts as he himself or others might be supposed to do under any given circumstances or conditions. Thus, he may be made to fight, to swim, to run, to stagger as if intoxicated, and so on. Even the sex may in this manner be mentally changed, and a lady may assume the manners, tone of voice, and language of her husband. Such persons also may readily be conducted in imagination to various distant countries or cities, when they will act and talk as if they were really there; or they may be conducted through a very complicated series of actions, such as a quarrel terminating in a duel; a fishing or shooting excursion, in which they catch numerous fish, or bag a quantity of game, etc., etc.

In the same way sleep is most readily induced, and may be made so sound that all ordinary stimuli will not awake them, and occasionally sensation is for the time annihilated. Yet it often happens that at the command of him who has been communicating the suggestive ideas, they immediately awake from a condition of sopor from which local painful applications would not arouse them. Susceptible persons may be even commanded to sleep at a particular hour on a certain day, and awake at a particular time, and this they will do under the idea that at the hour named some peculiar influence is exerted on them. This condition is analagous to that of somnambulism, trance or ecstasy, and presents all the intermediate gradations between these states and ordinary dreaming and reverie.

What is very curious in connection with many of these nervous aberrations, is, that a person may be perfectly conscious during the whole time of what he is doing, and even of the absurdity of the thing. He may know that the water he drinks is not milk or syrup, and yet he declares to have the taste of those liquids. Frequently, when his motions are influenced, he evidently resists, but seems to be controlled by a will stronger than his own. He even laughs at his own ridiculous actions, but acknowledges his helplessness. The efforts at resistance only induce fatigue, and tend to render him more certainly the victim of the influence by which he is governed. This condition is certainly closely allied to the incipient stage of monomania. It should also be noticed that, although young and nervous persons are undoubtedly those who are most commonly affected, such is by no means always the case, as many individuals, apparently in good health and robust, have been made to exhibit all the phenomena described.

Such are only some of the phenomena which may be produced in those affected with the peculiar nervous condition which I am describing. They admit of infinite modifications, but the symptoms are all referable to increase, diminution, or perversion of intelligence, sensation, or voluntary motion, variously combined, according to the endless train of suggestive ideas that may be communicated to the individual.

Similar phenomena have occurred in all ages, produced in certain persons by predominant ideas, and variously modified according to the education, politics, or religion of the period. Thus the effects produced on many votaries during their initiation into the ancient mysteries; the ecstasies of the Pythian and other priestesses; the influence of religious enthusiasm; the dancing epidemics of St. Vitus, or of Tarantism, in the middle ages; the hallucinations of the Convulsionaires at the tomb of St. Medard, in Paris, etc., etc., are of a like character. Numerous perversions of the nervous functions, identical in their nature with those described, consisting of sensory illusions, muscular convulsions or rigidity, and peculiar trains of thought influencing acts and conversation, may be found in the history of witchcraft or demonology, in the legends of the saints, the journal of Mr. Wesley, and in the accounts given by travelers of the religious camp-meetings in the

woods of America. They are perhaps more common now than previously, and excite even more astonishment among the ignorant, the only difference being that the same phenomena which in a dark age were attributed to divination or incantation now assume the garb of science, and are ascribed to Magnetism or Electricity.

I consider it unnecessary to enter into any lengthened argument to refute the numerous hypotheses which ascribe these effects to external influences. I know of no series of well-ascertained facts capable of supporting such a doctrine. Lately I have tried numerous experiments with the aid of those who believe in Animal Magnetism, all of which have only convinced me that no such principle exists, and that all the phenomena really occasioned depend on suggestive ideas communicated to the person affected. But while these theories scarcely merit attention, the facts themselves are highly important, and demand the careful consideration of the physiologist and medical practitioner.

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From the American Medical Monthly.

### Varicose Aneurism, and its Treatment.

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IN the *New Orleans Medical and Surgical Journal* for September, E. D. Cherry, M. D., of Columbus, Miss., reports a case of aneurism by anastomosis of the face, successfully treated in the following manner: "The common carotid was ligated at the point of election, and also the superior coronary artery on the opposite side. Several ligatures were passed through the upper lip, for the purpose of facilitating the obliteration of this portion of the tumor. I am induced to report this case from the fact that the ligation of large arteries for external aneurisms of this character is seldom attended with such encouraging results." We mention this case for the purpose of referring to a different treatment, practiced by Dr. Halsted, of New York. At the New York Hospital, last June, Dr. Halsted cured a case of varicose aneurism of the neck, by injections of perchloride of iron, (see *New York Journal of Medicine* for 1859, page 235.) "The patient was directed to lie upon his right side for an hour or two, when the tumor became distended; the doctor then injected fifteen drops of the liquid into a portion of the tumor upon the neck, and in a few seconds a coagulum could be felt in that spot, somewhat circumscribed, and about the size of a large hickory-nut. The instrument used was Luer's, which was brought from Paris by Dr. Suckley, and kindly loaned to the hospital. A little œdema began to show itself at the end of an hour after the operation, but subsided altogether in a day or two, leaving a hard, cartilaginous-feeling clot. In the course of the next three or four days the remaining portion of the tumor was injected; the same quantity was used, and with the same result. The tumor upon the neck is obliterated, and that without any unpleasant symptoms." Should Dr. Halsted's method of cure give like results in subsequent operations, it will take preference to ligation of the carotid artery, though it may not accord with the operative ambition of some young surgeons, by its superceding a showy procedure.

From the London Lancet.

### On the Treatment of Tetanus by Wourali Poison.

TO THE EDITOR OF THE LANCET.—Sir:—In *The Lancet* I find it stated that “M. Vella, of Turin, arguing from the fact shown by M. Bernard in 1850, that the woorara poison is a direct sedative of the motor nerves, undertook a series of experiments which clearly showed the antagonism between strychnine and woorara. Being appointed to the French Military Hospital at Turin during the late campaign, and seeing several cases of tetanus which had resisted opiates, ether, &c., M. Vella resolved to try woorara. The first trials were made upon two patients who had been suffering from tetanus for four and five days respectively, in consequence of gun-shot wounds. They were both in a semi-asphyxiated and desperate state. The woorara produced a general relaxation of the muscular system, whereupon the patients felt much relief; but they both died. The same treatment was, however, employed upon a third patient, who recovered. He was a sergeant, thirty-five years old, tetanic from a gun-shot wound of the foot. Two grains of woorara were dissolved in nine drachms of water, and compresses moistened with the solution were applied to the wound; the strength being gradually increased to fifteen grains in fourteen drachms of water. For the first four days the compresses were renewed every third hour; afterwards every fifth hour, up to the twelfth day, when the changes were reduced to three and two in the twenty-four hours. In twenty-two days the patient could leave his bed, and returned to France thirty-six days after the first application of the woorara.”

You may, perhaps, remember that in 1856 I pointed out, in the pages of your journal, the antagonistic action of wourali and strychnine—citing three experiments to show that these two substances have the power of reciprocally neutralizing the effects of each other, according as the one or the other poison is in excess. The conclusion I then drew from my experiments was, that wourali might be used as an antidote for strychnine. Since 1856 I have frequently repeated these experiments, and on several occasions have succeeded by means of wourali, in saving the lives of animals to which I had administered strychnine in poisonous doses.

Two years ago, through the kindness of Professor Varnell, of the Royal Veterinary College, I had the opportunity of trying the effects of wourali on a horse laboring under a very severe attack of tetanus. Although I did not succeed in saving the life of this animal, I nevertheless saw enough to convince me of the value of the remedy. Indeed, I was so convinced of its beneficial effects, that I would have tried it on a boy laboring under traumatic tetanus whom I shortly afterwards saw along with Dr. Madge, had the disease not yielded to other remedies.

Seeing the success that has attended the administration of wourali poison by M. Vella, and the results of my own experiments, I feel anxious that this substance should receive a fair trial at the hands of the profession. No doubt wourali is a dangerous poison, but in hands habituated to its use, I believe it is not more to be feared than opium or any of the stronger drugs.

I am, Sir, your obedient servant,

GEORGE HARLEY, M. D.

From Championniere's Journal.

### Treatment of Obesity.

MR. DUCHESNE DUPARC read a short paper on the use of *fucus vesiculosus* for the treatment of obesity. Having tried this plant for the cure of inveterate psoriasis, the author came to the conclusion that its reputation for the removal of that disease was much superior to its real value; but that in another respect the drug produced an unexpected result, *fucus vesiculosus* inducing rapid loss of flesh, without discom'ort or disturbance of the digestive functions. Mr. Duchesne related several cases whence it appears that in persons affected with premature or excessive obesity, the weight of the body may be much reduced by the use of the leaves and stems of *fucus vesiculosus* in decoction, powder or pills.

[From the London Lancet.]

### On the Treatment of Epididymitis.

TO THE EDITOR OF THE LANCET.—*Sir*:—Having frequently seen the acutely painful congestion and inflammation of the epididymitis treated with severe and sometimes baneful remedies, as the strong mercurial ointment, often pushed to the threshold of, and sometimes to, actual salivation! I am anxious (if you will allow me space in your valuable publication) to describe a method of treatment which I have always found successful in a number of cases of this complaint, and of every degree of intensity in their symptoms. I, therefore, on the first day of treating the case in hand (having relieved the bowels, if necessary, with a mild laxative), keep my patient in the recumbent position, and confined to a diet consisting of barley-water, tea, and mutton-broth, with bread alone as the *piece de resistance*. Hot-water fomentations to the scrotum I enjoin to be frequently employed (and this treatment alone will often remove incipient attacks, also those idiopathic ones occurring in young and healthy youths at puberty). To continue: after the first day's preparatory treatment with "simples," I give the tartrate of antimony in doses of half a grain for an adult, with from three to five grains of the extract of hyoscyamus, in a pill, every four hours, unless the case should present cerebral and other febrile symptoms, when a common saline mixture, consisting of nitrate of potass with ipecacuanha wine, etc., will reduce these, and make the skin act, when I can resume the tartrate of antimony regularly until the tumor be resolved.

In cases of this disorder occurring in debilitated frames, the congestion appearing to arise from a vitiated condition of the blood, the healthy red corpuscles being at a minimum, I have found, after the usual preparatory treatment, that the administration of the tincture of sesquichloride of iron in five minimum doses, or of the sulphate of iron and sulphate of magnesia (combined, and each in small doses,) has cured the patient.

I have never had occasion to use bloodletting (even by leeching) or mercury in treating "swelled testicle," and have always found the before-mentioned plan of treatment rapidly and steadily succeed in resolving the largest tumors of this description, and have also found it useful in reducing obstinate and chronic buboes which have defied both blisters and iodine, etc.; the only difference in the treatment of the latter is that I have given the nitrate of potass with ipecacuanha, in small doses, instead of the potassio-tartrate of antimony.

It is probable that the explanation of the value of "preparatory dilutant treatment," in local and organic congestions, is that blood discs, by "endosmose" rendered more pervious to the action of remedies, such as tartrate of antimony and nitrate of potass, more rapidly respond to their stimulus; and being contracted in volume, the capillary calibre is also reduced upon them; and lastly, the circulation in ultimate capillaries is accelerated, and congestion relieved.

I am, sir, your obedient servant,

M. R. C. S. E. (Army.)

From the New York Medical Press.

### Congestion of the Brain with Convulsions.

*Medical Case reported by Dr. Harris, Senior Assistant Physician, New York Hospital.*

PATRICK S—, æt. 22, a native of Ireland, and by occupation a cook; entered the hospital, Nov. 26 h, 1859, service of Dr. Smith.

The patient had been exposed for hours to the heat of the fire while cooking, and had also been drinking pretty freely; he had complained during the day of slight headache and malaise, and late in the afternoon he was suddenly prostrated with convulsions which followed each other in quick succession. About two hours after the attack he was brought to the hospital. On admission, patient was insensible; pupils dilated; surface warm; pulse 110; heart tumultuous in its action; and having slight convulsions every few minutes; these convulsions were not epileptic in character, but somewhat tetanic.

Ordered an enema of Ol. Terebinth, and Tr. Assafetida, and Sinapisms to the feet.

Nov. 27th. Patient more quiet to day, but still has convulsions occasionally, surface very warm, in fact the case has every feature of sun-stroke.

Ordered R Tr. Assafetida, oz. iss. Tr. Valerianæ Amm. oz. ss. M. Cap. oz. i. q. t. h.; cold to the head, and Emp. Vesicat. to the lower extremities.

Nov. 28th. Convulsions ceased yesterday afternoon, but patient continued insensible, and in a soporose condition, and during the night died comatose.

Autopsy, twelve hours after death. The vessels on the surface of the brain were very turgid, but no extravasation had taken place, and no effusion under the arachnoid; the substance of the brain was highly congested, but no softening or effusion into the ventricles; stomach congested; all other organs healthy.

From the London Lancet.

### Tests for the Purity of Chloroform.

M. BERTHE gives the following directions in the *Moniteur des Hôpitaux* :—

Chloroform may contain chloride of elaidine, alcohol, various chlorides, amylic and methylic combinations, and aldehyde. By adding caustic potash to chloroform containing chloride of elaidine, the compound is transformed into chloride of acetylc, the factor of which is immediately noticed. In order to ascertain the presence of all the other compounds which may be mixed with the chloroform, especially alcoholic compounds, pound a small quantity of bichromate of potash in a little chloroform, and add to this mixture a few drops of sulphuric acid. If the chloroform is pure, a reddish-brown precipitate of chromic acid is formed; if not pure, the acid is reduced, whilst the precipitate, or sometimes the liquid itself, assumes a green color, dependent on the presence of the sesquioxide of chrome.

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From the American Medical Monthly.

### Singular Case, and yet more Singular Statement.

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DR. A. R. NEWSOM sends the report of a case to Dr. Benne't Dowler, asking for an explanation at length. The report is published in the September issue of the *New Orleans Medical and Surgical Journal*, and Dr Dowler indulges in four pages of remark, but does not deny the correctness of the statement. The following extract from the report will give an idea of the case: "There is a negro in Franklin County, Mississippi, who is 34 years old, of large size, and was born and raised in that county. About three years ago he was severely attacked with disease, which rendered him helpless for months. During that time the *entire skin* (hair and nails) *peeled off*, leaving nothing but the *flesh and bones*. In a short time the skin commenced growing again, and *soon* covered the whole body, and now he is perfectly pied all over, the spots being of all shapes and sizes."

A disposition to report strange and marvelous cases is quite too prevalent in the profession. It should be allowed to characterize quacks, and not members of the regular profession. We think a more brief and pointed reply would have been more to the purpose.

Any person, even a "darkey," would have made a sorry attempt at living, denuded of the *entire skin*; and were life possible under the circumstances, which is very far from being the case, the fact that it was *soon* entirely reproduced, is a complete refutation of the whole story. We once saw a case in which the entire skin was removed, over a surface 13 by 15 inches, (195 square inches,) and it required *fourteen months* to reproduce it! Had the entire skin been removed, no attempt at reproduction would have been possible. That the *cuticle* might have peeled off is possible, and a change of color in the negro is not an event of unheard-of occurrence.

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From the Cleveland Med. Gaz.

### Valerian in Diabetes.

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ROUYER and Trousseau first discovered the beneficial effect of large doses of the root of valerian in diabetes, even thirty grammes per day. Trousseau corroborates (*Gaz. des Hop.*, 113, 1858,) their statements by a case treated by him in the same way. The patient had been, for a considerable time, subjected to different courses of treatment, embracing nearly every remedy known to have ever proved successful, without any relief; the only noticeable benefit appearing as long as he took, besides other remedies, ten grammes of the powdered root of valerian minor. The disease had lasted thus four years, when Trousseau prescribed first ten, then twenty and thirty grammes of the extract of valerian, with the most astonishing result: the quantity of urine decreased steadily, and in twenty-six days the patient could be dismissed, the urine voided during a day surpassing the quantity of fluids taken by only one litre.

## Communications.

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### On an undescribed form of Peritoneal Hernia, with Cases.

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BY H. H. TOLAND, M. D.

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BY HERNIA, as defined by authors, we understand "The displacement of any organ—from the cavity in which it is naturally contained, by being protruded through a channel, or accidental opening in its walls." According to Erichsen, hernia, whenever it occurs, consists of a sac and its contents. The sac, in abdominal hernia, is a prolongation of the peritoneum which covers the opening through which the part protrudes—and every organ, except the pancreas and stomach, has been found in these tumors.

Ventral hernia includes the protrusions that appear upon the external surface of any portion of the abdominal parietes, except the inguinal femoral and umbilical. These protrusions generally occur in the *linia alba*, it having apparently yielded during parturition or some violent muscular effort. They are described as being very large, not liable to strangulation in consequence of the size of the opening, and easily reduced and retained by an ordinary bandage. That the opinion as expressed above, when applied to ventral hernia, is entirely incorrect, I am convinced by facts that have recently fallen under my observation. Many cases of this character present peculiarities that have neither been observed nor recorded in any medical work which I have consulted. They occur in the *linia alba*, between the umbilicus and ensiform cartilage, and are destitute of one of the characteristics of ordinary hernial tumors, consisting of a sac without contents.

They vary in size from a quail's to a hen's egg, are sensitive to the touch, soft and pulpy, never become tense or elastic, and I think are not very liable to strangulation, although they are a source of great uneasiness and distress to the patient, frequently causing pain and nausea when irritated.

This variety of hernia, to my great surprise, has not been described by those who should have been familiar with its existence and character, as I have met with at least a dozen cases in my own practice. My attention was first directed to this subject in 1829, when a medical student, although many years elapsed before an opportunity was presented for proper investigation. A strong, muscular man, applied to my preceptor, having two tumors between the ensiform cartilage and umbilicus, about the size of a quail's egg, from

which he suffered greatly, particularly after taking violent exercise. They were irreducible, and consequently, mistaken for fatty tumors that were developed in the cellular tissue between the tendons of the muscles and integument, and the patient being unwilling to submit to an operation, palliatives were only presented.

After returning from Europe in 1835, I was consulted in a case of similar appearance, in which only one tumor of greater magnitude existed. It was pediculated, soft and doughy to the touch, and unusually sensitive. Believing that it escaped from the abdomen, and being unable to determine its true character, I declined to perform the operation by which the patient supposed he would obtain immediate relief. From that time until 1858, I was consulted frequently in such cases without adopting a decided course of treatment, when I determined not only to make an effort to relieve the distress produced by the difficulty, but also to ascertain its origin and character.

In March, 1858, I was consulted by a Mexican, aged 33 years, from an adjoining county, who had suffered several years from two tumors that existed between the ensiform cartilage and umbilicus, of the size they usually acquire, and which were so troublesome that he readily consented to obtain relief if it could be afforded even by a dangerous surgical operation.

Assisted by Dr. Wooster, after the administration of chloroform, the integument was elevated and divided the entire length of the largest tumor, and then the cellular substance was carefully dissected from its external surface. It presented the appearance of peritoneum, was pediculated, and had unquestionably escaped from the abdomen by an opening not more than sufficient to admit a goose quill, and through which it was easily returned. The appearance of the tumor, its reducibility when detached from the surrounding parts, and the distress occasioned by pressure and even violent exercise, convinced me that the tumor resulted from hernia of the peritoneum, which had passed through an opening so small that the abdominal contents were, fortunately, excluded.

The second and smaller tumor was treated in a similar manner, with the same result.

In order that a radical cure might be effected, the external wound was closed by silver sutures, and a firm compress and bandage applied, so as to secure by pressure the adhesion of the skin to the subjacent parts, and effectually prevent a return of the disease. In ten days, the object of the operation was secured. The external wound was firmly and completely cicatrized, and the skin adhered to the subjacent parts, so that a return of the tumor at a subsequent period will most probably be impossible. The result of this operation was exceedingly gratifying to both myself and Dr. Wooster, and it afforded an opportunity of investigating the character of a difficulty by which I had been long and greatly perplexed.

Hernia of the peritoneum rarely becomes strangulated, and consequently, fatal, which, however, is not impossible when its character is considered. The



result of this operation, which I believe is the first that has ever been performed to relieve a patient from the distress resulting from this otherwise incurable disease, will, I hope, meet the approbation of the profession, and consequently, prevent much human suffering.

*Case 2d.* In October, 1859, J. Allen, aged 26 years, consulted me respecting a tumor located about three inches above the umbilicus, much larger than a quail's egg, and from which he had suffered for several years. Being satisfied from its position, form and feel, that it resembled those previously treated, I determined, having obtained the patient's consent, to perform a similar operation. Being at my office, and under the influence of chloroform, after elevating the skin so as remove the possibility of wounding the tumor, an incision was made by which it was exposed. It presented the same appearance as the preceding, and when detached from the cellular substance to which it slightly adhered, it was returned into the abdominal cavity without much difficulty, through an opening that would scarcely admit the extremity of the little finger. The external wound was closed and dressed as in the preceding case, and the patient returned to his boarding-house without assistance, and suffered no more inconvenience than would result from a simple incision of the same extent.

Recently I was consulted in a case of the same character, which is a source of great inconvenience to the patient, and who will submit to the operation by which a radical cure can only be effected, as soon as circumstances will permit.

I am induced to believe from the result of my experience, that this form of hernia is much more painful than the ordinary varieties when not strangulated, and the course of treatment recommended, entirely different from any heretofore either suggested or adopted.

I believe the operation to be both safe and effectual when carefully performed; every precaution should be taken neither to wound the protruding peritoneum nor irritate its external surface by unnecessary violence, as either might produce peritoneal inflammation, which is always highly dangerous and frequently fatal.

I have never succeeded in reducing this form of hernia by taxis, and from the condition of the parts that existed in the cases first detailed, it is more than probable that adhesions take place very soon after the peritoneum escapes through the abdominal parietes, from its extreme adhesive tendency when inflamed, and which will render a reduction of the hernia, even at an early period, impossible.

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## Editors' Table

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**OURSELVES.**—With this number, (No. 25,) we enter on our third volume. We have labored honestly, and as carefully as our little leisure would permit, for the good of our readers. There has been no new discovery in medicine or surgery published in Europe or America for the last two years, that is not chronicled in one of our volumes.

We have kept up with the vanguard of the profession. We puff no man nor clique. Our contributors must defend themselves; we have neither the leisure nor the inclination to advocate any man's cause. We publish facts and opinions as we find them, criticising when we feel disposed. The Journal is independent, and will remain so while edited by us. We ask the continued patronage of the profession, and thank our brethren for the past. We thank our Exchanges for their numerous courtesies and uniform promptness. If we have failed in either, it has not been intentional. W.

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**TO OUR EXCHANGES.**—Some of our Exchanges say they have not received the August number of our Journal. We are sorry; we thought we sent a copy to each; but now it is past remedy, as the whole edition for August was exhausted in September. We cannot supply the missing number.

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**TO SUBSCRIBERS.**—If any one has an August (1859) number of this Journal, and will part with it at cost, send it to us and we will remit. We want several copies to complete volumes.

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**PERSONAL.**—Hereafter, the patronymic initial of the author will be affixed to editorial matter in this Journal.

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**PHYSICIANS' FEES.**—At a meeting of the Association of Physicians of the department of the Sonne, (France,) the following resolutions were passed:

1. "That in charging, the number of visits is not to be considered as sufficient for the estimation of value of services, but that the gravity of the disease, the importance of the operation, the dangers incurred by the physician, and still other circumstances, such as the social position and fortune, &c., of the patient, should be taken into consideration.

2. "That the period has arrived when physicians should be better remunerated."

We concur, with this additional suggestion: that physicians, like lawyers, should always require an advance fee from five dollars upwards, according to considerations mentioned above, which should, of course, be deducted from the final bill. W.

## ( A B S T R A C T S . )

MEDICO-LEGAL.—The following case of matricide, with the remarks of Professor Miraglia, of Naples, upon it, we abstract from the *Bullettino delle Scienze Mediche*, September, 1859 : —

On the 25th of May, says Miraglia, about five miles from Naple, as young man killed his own mother, eighty years old, while she was sleeping. The intelligent magistrate, before whom the man was arraigned, being unable to imagine any motive for an act so atrocious and unnatural, suspected the intellect of the culprit, and asked my opinion. After hearing the legal process, and observing carefully the delinquent, I found sufficient evidence to convince me of his insanity.

Forensic phrenopathy well understood, will clearly explain both to the jurist and physician, acts that would otherwise remain problematical. By the careful consideration of this case, I have thought we might more clearly see, how much justice might be aided by a knowledge of the physiology and pathology of the brain, founded upon the principles of sound philosophy.

Raffaele Del Prete, aged thirty-six, bilious lymphatic temperament, intelligence extremely limited, of very melancholy character, in whom the ascetic sentiments predominated, and with a conscience that would make him fear to do wrong, was considered by every one to be of a good and devoted disposition, respectful and affectionate to his aged mother. He fell sick : he made a vow to give money, that masses might be said ; he got the money in two or three months, and gave it to a hermit, to have his vow fulfilled. He told this to his confessor, who reprimanded him, and warned him that he would be damned for giving the money of the mass to a hermit. Upon this, Del Prete became thoughtful, and went no more out of his house, and considered his damnation as fixed ; he no longer kissed the holy images. His mother begged him to go out : she was always asking how they were to obtain the means of subsistence, except he earned something. He was irritated at being in debt and that he could no longer get credit for daily wants. One night he got out of bed and, taking a large club, went to his mother's bed while she slept, and beat her to death. His brother, aroused by the noise of the repeated blows, lit a lamp and beheld his mother weltering in her own blood, and the murderer standing near, who exclaimed that his mother was dead. The brother ran out to call assistance and returned with other persons. The matricide being arrested and questioned, said that the devil was always by his side, urging him to kill his mother ; and that the night before, while his brother slept, had been agreed upon for the accomplishment of the devil's commands.

In prison he appeared at times indifferent, and again violently excited ; again, after howling like a beast, and exhibiting all the signs of despair, he would drop down and remain for hours upon the floor.

Questioned by us, he declared the devil compelled him to kill his mother ; that the demon presented himself in various hideous forms, both in the day time and in the night ; that previously he had him in his belly ; that the Lord would cut his eyes out if he failed to do whatever the demon commanded him. The narration of the autopsy of his mother's body he heard read with indifference. In all our conversations with the prisoner, it was easy to arouse in him the predominant idea of being possessed and driven by the demon ; and also consternation, at having been obliged to kill his mother, the recollection of which reminded him of the looks and actions of her whom he had so fondly loved, and yet by the infernal spirit, had been compelled to cruelly murder : he was aware he had committed an awful crime, but he did not know the penalty ; his greatest torment was the demon which already had possession of his body.

On examining him physically, we observed his eyes scintillating, the albumina of a yellowish color ; his physiognomy subicteric and contracted ; abdomen tumid, and liver engorged ; pulse full (*turgido*) and hard ; gate uneasy and wavering ; look now as if suspicious, anon stupid.

The anatomical representations of the cerebral faculty correspond exactly to his torpid and limited intelligence, and to his exalted sentimentality, and to this instinct, easy upon impulse, to become impetuous. First of all, the forehead, the residence of intelligence, was very narrow, but high at the apex of the *os frontis* — evidence of benevolence and veneration. But all the posterior and lateral portions of the head greatly predominated over the anterior, characteristics which mark the man of instinct, easy to be excited, little susceptible of education or correction.

These remarks premised, we will return to the motives influencing this individual to commit the crime, so that by appreciating the state of the mind itself while in the criminal intent, we may, by clear and simple induction, succeed in determining the impulses to the act, and the magnitude of the crime, as regards the delinquent.

Our faculties may be reduced to three classes :

1. *Instinct*, which produces *impulses*, but not ideas nor judgment.
2. *Sentiments*, producing neither ideas nor judgment, but simply emotions.
3. *Intellectual* faculties, which produce *ideas, judgment and ratiocination*, and which possess the power to direct, excite and moderate the instincts and sentiments, which constitute the *affective* faculties.

Now this natural classification of the faculties being admitted, it is easy to understand how, by the predominance of one class over the other, the mind will have more impulses and emotions, and more or less acuteness of intellect ; and that by the nature of these faculties, the impulses and emotions, productive of the *affective* faculties, should more easily dominate the intellectual faculties than be controlled by them. Thus the intellectual faculties give way to the impetuosity of the *affective*.

The elements of the intellectual faculties, by which the mind acts, judgment and reasoning, come not from the sensations only, but also from interior

impressions produced by the affective faculties; thus the premises of our judgment are not only without, but also within us. For these reasons, our judgment is not only according to external facts, conditions and circumstances, but also according to the internal condition of our organs.

[From this close and natural logic, it will be seen how utterly futile it is to expect impartial judgment, or judgment according to the law and the evidence only, from men.

Again, it may be laid down as a rule, that the *affective* faculties of three men out four, predominate over the intellectual, and hence the necessity of directing penalties to these faculties, that is, to the animal instead of the intellect. The punishment must be felt primarily by the organs of the body, and not secondarily through the medium of the intellectual faculties, or in most cases it will be nearly null.—ED. P. M. J.]

Every one knows the brain is the organ of the mind and of its faculties, and that this relation is indispensable in the present life for the operations of the spiritual entity. The manifestations of the phenomena of life depends upon the presence of the vital spirit in the organism, and upon the condition or state of the organs themselves. This explains how the predominance of exalted functions of the organs, renders the affective faculties predominant, strange or erratic.

But keeping in mind the different classes of our mental faculties, above indicated, upon these becoming affected, we have disordered mental manifestations :

1. In affections of the reflective and perceptive faculties, which constitute, *intellectuality*, the mind possesses incoherent ideas from false conclusions, and is irrational.

2. In affections of the *sentiments*, the mind suffers most painful and strange emotions.

In perversions of the *instinct*, the mind exhibits impulses that are irresistible and incorrigible.

For this reason, one may be mad with perverted reason and incoherent ideas, without irresistible impulses and emotions ; and for the same cause, one may be insane, manifesting alterations in the *sentiments* and the *instincts*, but at the same time may reason and judge. But in this case, the judgment is strange, because the premises from which it results are strange ; and these last are those founded in the *impulses* and *emotions*. [This species of maniacs has judgment peculiar to itself, which may be considered rationally irrational. This was the madness of Hamlet.]

Madness, then, is not always founded upon irrationality ; but always upon the impossibility of the maniac recognizing his own disease, and of directing his actions, the will being eclipsed or perverted by his own belief that he is of sane mind.

If the psycho-physiological axiom be granted, that the mind operates upon the elements which its faculties present to it, and that these faculties, by their exercise, are connected with the faculties of the cerebral organs, its operations are exact when the impressions it receives from those organs are normal, and on the contrary, they are perturbed and strange, when these im-

pressions are modified by material morbid alterations in the organs, and consequently in their functions.

[This appears to be the meaning of our author, in one word : that if a man is crazy, he is crazy, and if he is not crazy, he is not crazy, which is undoubtedly an axiom as well to common sense as to psycho-physiology.]

These considerations bring us to the conclusion, that the *abuse* of our faculties by the calculations of reason, or by deliberate volition, impels us to vicious and culpable acts, and that lesion of these faculties by disease, that is, by incorrigible impressions from the altered functions of the cerebral organs, which are the organs of the faculties, leads to acts, which though bad, the mind believes good ; and as it never perceives the criminality of the proposed act, it cannot help consummating it, in consequence of the irresistible internal force which urges it onward.

We must now estimate the motives, which, bringing the faculties into action, induce the mind to perform acts upon which it has determined. Thus, two classes of motives may act upon the faculties : impressions proceeding from the organs of sense, and those which proceed from internal organs. But their reaction, and that of the mind upon such different impressions may be more or less energetical ; thus the criterion of human action is based more upon the energy of the reacting faculties, than upon the force (*valore*) of the impressions. Hence the culpability increases in ratio to the weakness of the motive, and diminishes as the latter increases, so that any act reaches even the state of entire inculpability when the motives, especially the interior, are in insuperable, and so far predominate as to draw after them or obscure the reason.

[We cannot help reminding the reader of what will, no doubt, occur to him, that this logic leads to the most destructive results — destructive of individual morality and social security. For, if the force of motive can be plead in bar or mitigation of punishment, there will remain in the mind less obstruction to the vicious motive by just so much as the dread of punishment is diminished, and the result is that crime will increase with the increase of motive, while criminality or culpability will diminish in the same ratio, and these forces continuing to act on each other, would reduce the earth to the anarchy and license of a mad house without a keeper, annihilate property and leave mankind in primitive barbarism. This is the theory of those one-idea philanthropists. It is correct if there were but one man in the world, but one living creature endowed with the rights of intellectual life. The theory is an abstraction mathematically correct when isolated, but the perturbing forces of society, of the multiplicity and variety of human interests and rights render it so erroneous as to make it equal to the untrue. According to the solitary law of accretion of fluid matter, the earth should be an exact sphere, and was once so considered, but when the modifying element of circular motion of the mass was estimated also, it was observed that it must vary from a sphere and become oblate within certain limits. So the genuine mental cosmogonist considers not simply individual man, isolated and solitary in the desert of matter, but he considers the perpetuity of races, the purification and consequent felicity of nations, and recognizes the necessity of implanting motives to good where none exist, and obliterating motives to evil by the utter destruction of incorrigible villains, lest their progeny should vitiate unborn generations.—]

The motives or circumstances, then, which impel to crime being more or less active, justice must, in contemplating the latter, consider the state of the person while determining to commit the crime more than the act itself. The enormity consists in the unrestrained volition of the delinquent. If his will be under control of his reason, he is guilty, providing the reason itself be sane.(!)

We thought it indispensable to record these psycho-physiological considerations, in order that we might recognize the state of mind imputed to Raffaele Del Prete.

Matricide is so atrocious a crime that the axe of the executioner is but an insignificant punishment for the guilty; but still, it would be most lamentable if it should fall upon the neck of one whose disordered mind had reduced him to the condition of the brute.

What motive then impelled Del Prete to the commission of so great a crime? No external motive could we discover in the criminal process: only the slight reproach of his mother, who wanted him to go out and work; and reproaches of the confessor, for his having done wrong in giving money for the mass to the hermit, for which he was damned (!) Such slight motives bear no relation to the enormity of the crime, except considered as the spark that begins the conflagration.

We must then seek within, the real motives of the grievous agitation of the mind of Del Prete. He had a scrupulous and devotional conscience, loved his aged mother, had the reputation of being mild and honest: from a melancholy temperament, the transition was easy to that sadness of mind in which every impression becomes exaggerated. Hence a religious sentiment and a scrupulous conscience, undirected, except by a very limited and uneducated intelligence, were strangely transmuted into desperation and religious terror, and into an *exaggerated conscience* (*doppia coscienza*), struggling between good and evil. Such a state, mental physicians call *Lipemia ascetica*, which, reaching desperation by fantastic hallucinations, may lead to the most lamentable and terrible consequences. Thus Del Prete, surprised by hallucinations manifest to the sight and the hearing, saw and heard the evil spirit; he no longer possessed volition, because he thought he was possessed, and saw the spirit in the strangest forms. The confession of Del Prete, that he was compelled by the demon to kill his mother, was made with so much simplicity, that it demonstrates how completely his reason had yielded to the influence of the fatal hallucination.

The conduct of Del Prete previous to the murder (for several days at least) demonstrate the *Lipemia ascetica*, which afterwards, accompanied by hallucinations, made him believe himself possessed, and under the effects of this morbid state, the murder was committed. But besides the psychological reasons, we perceive material causes of the madness of Del Prete. Observe the physical phenomena of the infirmity, already remarked — phenomena which, by their nature, cannot be of recent date. Madness is not a purely psychical phenomena, as there is also a moral perturbation which has

its true primary cause in the functional disorders of the cerebral organs through physical modifications.

It is a fact which all *Alienists* have observed, and we have noticed it in our works, that *Lipemania ascetica*, with hallucination, is constantly attended with the phenomenon of fantastic visions, and that excited by external motives, real or imaginary, it induces to homicide or suicide. (1.)

Here the question will arise : could not the phenomena of madness, which Del Prete presents, be feigned, to avoid punishment ?

The intelligence of Del Prete is so limited that he would not be likely to feign a species of monomania whose phenomena are so singular and constant, that the most cunning wickedness could not imitate them, except urged on by the disease itself. And, moreover, the conduct and manner previous to the murder, as revealed by the legal examination, demonstrate the pre-existence of the lipemania ascetica : the subsequent acts were the consequences. The great disproportion between the natural character—"he had a good disposition"—and the enormity of the crime without external motives, leave no doubt of the mental alteration by physical disease, which is now apparent. Moreover, Del Prete formed rational or accurate conclusions upon strange and irrational premises, which occurred to him from exaggerated internal emotions ; so we should rather say his was a madness imitating rationality, rather than a sane condition of mind feigning insanity ; the latter would be a most unaccountable sophism opposed to facts and rational induction. This affection having its primitive origin in the anatomical disposition of the brain, its cure may be considered almost impossible. It is a most dangerous form of mental alienation, from which acute delirium may arise at any moment, and which may manifest itself upon the slightest provocation, and most generally by homicide or suicide.

NAPLES, June 10th, 1859.

N. B.—We would add, that Del Prete died in prison, at Naples, in August following, of cerebral devastation, of which madness was the melancholy and special phenomenon.

*Gaz. Med. Ital.*

PERCHLORIDE OF IRON.—The perchloride of iron (*Gaz. des. Hop.*) has silently received scientific baptism, and its future is settled by the concurrence of the medical profession itself. It is astringent, sedative, tonic, detergent, anti-septic and neutralizing.

CEREBRAL FEVER.—Trousseau says he has in all his long experience never known but *two* cases recover. "I treat these cases," says M. Trousseau, "not with the expectation of rescuing them from their fate, but to afford some consolation to relatives of the little sufferers."

(1) *Miraglia : Trattato de Frenologia applicata alla medicina, alla giurisprudenza criminalia, all' educazion, alla morale, alla filosofia, alla arte bella, etc. etc. vol. 2, p. 86, et 158.*



## RADICAL CURE OF LACHRYMAL FISTULA AND TUMOR.

BY DR. TAVIGNOT, *Gaz. des Hôpitaux*, 27th October, 1859.

I ADMIT five distinct species of lachrymal tumor: 1. Lachrymal tumor with possible reflux of muco-pus by the puncta lachrymalia and nose. 2. Lachrymal tumor with possible reflux of muco-pus by the puncta alone. 3. By the puncta or the nose. 4. Lachrymal tumor without possible reflux of muco-pus by the puncta lachrymalia nor by the nose. 5. Lachrymal tumor with perforation of one of the ducts, or of the sac itself, without external opening, that is, extra-cystic lachrymal tumor, as I have called this variety. But we must not lose sight of the exciting cause of this disease — the syphathetic condition of youth, scrofulous vice, syphilitic infection — nor the caries of the bone, with which it may be complicated; nevertheless, we should, in practice, be guided by the characters peculiar to this or that species of tumor, with reference to the propriety of an operation. First extirpation of the gland was practiced, then excision of the anterior portion of the ducts, and finally, excision is superseded by galvanic cauterization. All means have been tried by my predecessors, but they have failed to cure in a great majority of cases. This resulted from our complete ignorance concerning the nature of the disease, which consists, as I have already said, in the occurrence of a want of harmony between the chemical properties of the tears and the physiological properties of the muco-lachrymal mucous membrane. [This definition of the nature of the disease called lachrymal fistula, is both simple and unintelligible.]

Once this point of departure (namely, the above definition) established, and it being impossible for science to restore the disturbed organic harmony, it is only necessary to interrupt every species of contact between the sac and tears, by causing the obliteration of the lachrymal ducts. Experience has taught us to satiety, that lachrymation after the operation is either entirely absent, or in all cases insignificant. Thus now, in substituting galvanic cauterization for palpebral excision, to obtain the occlusion of the ducts, we do not change our therapeutic method; we only simplify the manner of accomplishing it, nothing more.

*Operative process — first stage.*—A stylet is introduced into the sup-lachrymal duct, then into the inferior, in order the better to ascertain their course, which is marked with ink (the stylet being inserted) upon the skin of the eyelid.

*Second stage.*—The surgeon, armed with the galvano-caustic wire, not enameled, heated to white heat, runs it along the marked line under the eye, over both ducts, from the puncta to within a short distance of the sac.

*Third stage.*—The stylet is now again inserted to verify the exact course of the electric wire, and to ascertain if the walls of the ducts are entirely disorganized.

The operation is finished; now we have only to treat the lachrymo-cystitis according to rules already given.

W.

## EPIDEMIC DYSENTERY.—FAVORABLE EFFECT OF CALORIFICATION.

*(Gaz. des Hop. of 12th Nov. 1859.)*

In the different articles we have published on epidemic dysentery which has every where prevailed (in France) during the course of the summer, there might have been noticed a passing remark in which Dr. Heyle, considering this disease as the result of diminution of the temperature of the body, deduced calorification as the best remedy for combating it. To-day we received from Dr. Laforgue, physician to the 40<sup>th</sup> regiment of the line, in garrison at Rome, a narration of the epidemic of diarrhœa and dysentery which afflicted that regiment during the months of July, August and September last, which he treated with means analagous to those suggested by Dr. Heyle.

"I am entirely of the opinion of Dr. Heyle," writes Dr. Laforgue, "concerning the treatment of dysentery. In this affection, as in diarrhœa, the first medication to be employed, and the most efficacious, is heat.

"I bring in support of this opinion, statistics based on a large number of observations.

"They are the following :

"In the quarter of this year, consisting of the months above named, there occurred at Rome, in the 40<sup>th</sup> of the line, 545 cases of diarrhœa and dysentery, all of which recovered. (This is a large number, and represents one in six sick during the whole three months.) That these two affections did not assume the usual epidemic marks, and were manifested with merely relative severity, our *confre* attributed to the calorification of the belly resorted to in the beginning.

"I do not make much difference between the diarrhœa and dysentery which affected my regiment. They are twin sisters. The same causes produce each. They were treated and cured by the same means. They have often taken each other's place in the same individual. We can, it is true, establish between them marked dissimilarities, by considering their anatomical locality and the diversity of their symptoms. But, considering their identity of cause, of morbid element and treatment, I have associated them under one denomination of muco-serous flux. In fact, in certain cases, the stools, which are composed of mucosity more or less bloody, accompanied with tenesmus, etc., etc., become serous and copious, with very violent colics, the disease is conquered. The soldiers would say, with the naivete peculiar to them, 'I passed grease and blood, but now it is all water.'

"The 545 cases of muco-serous flux were thus divided : diarrhœa variety; 411; dysenteric, 134. Total 545.

"515 cases were treated in quarters; 5 went to the regimental infirmary; 25 sent to the hospital. Total, 545."

Of the 515 in quarters, 237 were treated by M. Laforgue himself, and 278 by M. A. Sarrazin, first assistant, and to whom had been confided half the regiment.

This distinction is essential, because the treatment of the latter differed from that of the former, although both employed heat, which both considered of the utmost importance.

*Treatment of Dr. Sarrazin.*—In the morning, sulphate of soda, 10, 15 or 20 grammes, (a gramme is  $15\frac{1}{4}$  grains,) for one, two or three days, according to cases.

In the evening, one or two pills of the gummy extract of opium, 5 centigrammes ( $\frac{3}{4}$  of a grain) each.

*Treatment of Dr. Laforgue.*—First day, 1 gramme of ipecac in powder, and 5 centigrammes of tart. am., mixed and taken at a dose at the morning visit.

The next and subsequent days, ipecac by injection, according to indication, in variable doses.

In the evening also, one or two pills, containing extract of opium.

These two methods produced almost the same results. Ipecacuanha had no appreciable superiority over the salt of soda. The following is the proof:

*Patients treated by Dr. Sarrazin.*—Diarrhœa, 201, who underwent 617 days of treatment, or an average of 3 days, 1 hour and 40 minutes.

Dysentery, 77, with 322 days of treatment; average, 4 days, 4 hours and 22 minutes.

*Patients treated by Dr. Laforgue.*—Diarrhœa, 183; days, 425; average, 2 days, 7 hours and 45 minutes.

Dysentery, 54; days treated, 227; average, 4 days, 4 hours and 53 minutes.

The thirty cases sent to the infirmary and hospital were complicated with the Roman endemic fever, and were treated 542 days, or an average of 18 days each.

If M. Laforgue obtained in his diarrhœa cases an average treatment less by a few hours than that of Dr. Sarrazin, on the other hand he did not gain a moment on the cases of dysentery, which convinces Dr. L. that both modes of treatment are equally efficient, or equally indifferent. At least, he says they keep the patients within limits as to diet. But in his mind the explanation of their remarkable success is not to be found in the medicines employed. It is entirely in the calorification of the abdomen by flannel, externally, and warm drinks internally.

Every time a patient with diarrhœa or dysentery presented himself, it was rigorously required that he kept flannel applied to the abdomen night and day. Moreover, during the whole epidemic season, there was prepared for the use of the sick, a large quantity of decoction of liquorice root, constantly warm and aromatic with mint, or with fresh orange leaves.

Thus, M. Laforgue is quite disposed to believe that ipecac associated with antimouy or not, and the salt of soda and opium, were only adjuvants more or less active, or perhaps useless; but that all the benefit which appeared to result from the employment of these agents, should be attributed to heat.

"In 1849," continues our *confrere*, "at Lyons, the cholera, by one of those caprices of which it has given so many examples, struck the 19th regiment of the line, to which I was attached as first assistant, while it spared the population of the city and the other regiments of the garrison. More than half of our men had diarrhœa. Nothing availed, neither hygiene nor sanitary

measures, nor the treatment then employed. I took the notion of applying a sheet of cotton wadding to the abdomen. The colonel immediately gave orders to all the captains to purchase the cotton out of the ordinary funds of the companies, and deliver it upon my prescription. The next day all the diarrhœa cases were provided with a good sheet of wadding. The soldiers adopted with delight this comfort, of which they immediately recognized the good effects. After three or four days there was not one on the sick list. The disease was conquered."

To the intelligent prescriptions of Dr. Heyle, I would add the following :

When an epidemic of diarrhœa or dysentery attacks a locality, recommend the people to cover the abdomen, as a preventive, with a good envelope of flannel, or, better still, especially for the poor, with a sheet of wadding, which is warmer and costs only ten or fifteen centimes. W.

WOUNDS OF THE HEART.—The following are well authenticated cases :

1. On the 7th Dec., 1859, at 3 o'clock P. M., Alfonso Nasci received six wounds in a quarrel, two of them under the left mammary region, and one in the left epigastric region, both penetrating. At 7 o'clock P. M., same day, he died, in the entire possession of his mental faculties.

2. Cesare Pasquini, aged 27, about midnight, Jan. 6th, 1857, was brought to the Hospital Maggiore with six wounds also. Three of them were tegumentary. Of the other three, one of them was at the right of the sternum, just above the cartilage of the fourth true rib; another over the cartilage of the sixth true rib, penetrating from below upwards, and somewhat to the left, in the cavity of the thorax; the other was over the cartilage of the last true rib, also on the right side, and entered the cavity. After vomiting matter which smelt of whiskey and undigested food, he took a long and deep inspiration and died. The symptoms were identical with those given by Celsus. "Igitur corde percusso," says Celsus, "sanguis multus effertur venae languescunt, color pallidissimus, sudores frigidi malique odoris, tamquam irrorato corpore oriuntur extremisque partibus frigidis matura mors sequitur!" (*Cels. Lib. V., Cap. 26.*) At the autopsy of Nasci one wound was found to have entered the anterior inferior part of the pericardium and the inferior apex of the left ventricle into its cavity, making a wound in the heart itself half an inch long.

On Pasquini in the right superior portion of the pericardium there was a wound a line and a half in length. The heart had a wound one line long in right ventricle, near its anterior margin.

The one wounded the worse lived the longer. The editor, Mario Cresimbini, (*Bull. delle Sci. Mediche* p. 439, June, 1859,) believes it is not so much the wound that causes death as the effusion of blood, impeding the heart's motion by compressing it. Thus, if from any cause the wound should furnish but a minute quantity of blood before agglutinating, the functions of the heart might go on, and life until the cure was established by absolute quiet and proper remedies.

A boy, 12 years old, 17th March, 1859, was wounded in the precordial region by a shoemaker's awl. He fell and remained unconscious perhaps half a minute. After coming to himself he remained lying down, in a state of great prostration, about four hours; he afterwards walked home and was placed in bed; had symptoms of wound of heart up to the 19th, when he began to mend. In a few days he seemed completely well, and on the 22d, returned to his work. After having worked a little while he complained of new pain in the precordial region, and was obliged to go home. 23d, he was troubled with nausea; 24th, seemed well again, and went to work, but in the evening, while walking, he complained suddenly of weakness and of being sleepy, fainted and was dead.

At the autopsy it was discovered that the awl had entered the fifth intercostal space of the left side, penetrated the pericardium and wounded the left coronary artery at an inch from the apex of the heart, without infringing the muscular substance of the heart itself. The pericardium was full of liquid blood and recent clots. The wound made by the awl in the pericardium had cicatrized.

COCCYODINIA.—Mr. Simpson, (*Gaz. des Hop.*) has often observed this affection, always in women, who have uniformly referred it to a hurt or getting cold.

The most important symptom is pain at the coccyx, felt at every attempt to get up or sit down, persisting sometimes after the patient is seated, and often becoming so violent as to prevent this attitude completely. Sometimes the patient can sit only by resting on one ischium at a time. In some cases walking causes intense pain, at other times the pain becomes intolerable during defecation, etc.

Pressure on any portion of the coccyx increases the pain. It often lasts many years. In some cases it is always light, in others the pain becomes horribly agonizing. In the same case it varies considerably in violence. Mr. Simpson has not been able to determine the precise seat of coccydinia. He has been equally unsuccessful in his treatment, having tried, almost in vain, all sorts of remedies. In some cases, where there seemed to be acute inflammation of the affected part, leeches and blisters have succeeded to a certain extent. Subcutaneous injections of solution of Sulph. Morph. did no good. Mr. Simpson advises when other resources fail, the subcutaneous section of all the tendinous fibres that are attached to the coccyx. A strong tenotome is necessary, as the tissues to be divided are very firm. Mr. Simpson has succeeded in curing several cases by this operation. In very long standing cases he recommends the partial or complete exsection of the os coccygis.

W.

M. SOUREL, (*Gaz. Heb.* Nov., 1859), has given chloroform internally—dose, 10 to 40 drops in sweetened water—for spasm of œsophagus, sporadic cholera, and for violent cholic; all with complete and rapid success. In the cholera case he gave muriate of morphia also.

**TÆNIA.**—Dr. Allaire (*Gaz. des Hop.*, Oct.,) not having at hand any fresh bark of the pomegranate, gave fifty grains of jalap in three ounces of water to a patient 35 years old, known to have tænia. The result was the expulsion of a complete tænia, verified by a careful examination. This single case leads Dr. A. to think that tæniafuges are more numerous than imagined.

**CHRONIC DRUNKENNESS.**—Mr. Marcet, physician to Westminster, announces in the *Lancet* that oxide of zinc has a most favorable influence on the nervous symptoms consequent upon habitual intoxication. Dose: Grain and a half of powdered oxide of zinc twice a day, an hour after eating. Dose increased every three days till eight grains are taken daily.

**CHLORO-ANEMIA OF CHILDREN.**—M. Morat says in a note to the Academy, (*Ib.*) after long researches, he has arrived at this definite conclusion, *that chloro-anemia, far from being rare or exceptional in children, is on the contrary, the rule, for we encounter it at least in eight cases out of ten, from the age of one year to the period of puberty.* The treatment is already classic.

**WOMEN** can excel men in the exact sciences, as may be seen by the following item from *Comptes Rendus*, July 4th, 1857:

“M. Bertrand laid upon the desk of the Academy autograph manuscripts of Mademoiselle Sophie Germain, which the family of this celebrated *mathématicienne* recently sent to M. Geoffroy, Saint Hilaire, to be presented by him to the library of the *Institut*.

“It is known already that Mademoiselle Germain in 1816 won the great prize of the Mathematical Sciences. Besides the work pronounced excellent by the Academy, and in which she showed a profound knowledge of the most difficult theories of the science, Mademoiselle Germain has written many other memoirs on geometry, which are justly in high estimation, and which should still be consulted, even did not the sex of the author give them a peculiar interest.

“One of the autograph manuscripts sent by the family of the lady contains learned notes relative to passages in Lagrang’s theory of functions, which Mademoiselle Germain, as this work proves, had thoroughly studied.”

**DR. REEVES**, (*Lancet*, July, 1859), has employed a mixture composed of Iodide of Potassium, Tr. Iod., Chl. Pot., Nit. Pot., Liq. Pot., and water, in scarletina and angina. By this mixture internally, and the local application of iodine externally, inhalation of iodine, he has cured many cases of scarletina and angina. We have cured twelve consecutive cases of scarletina without this mixture, or any of its constituents, within the last three months.

GLYCOSURIA.—E. Burdel (*de Viergon*) says (*ib.*) 1. In miasmatic fever there exists true diabetis or glycosuria; 2. this glycosuria is only ephemeral, that is, being the expression of the disturbances going on in the organism, it appears with the fever, persists during the duration of the latter, and disappears with it; 3. the glycosuria of miasmatic fever clearly reveals the profound and peculiar disturbance which has stricken the equilibrium existing between the cerebro spinal system and the sympathetic system; 4. this explanation, given by Cl. Bernard, is confirmed by these facts; 5. the more violent the febrile accession, the more intense the chill, the more considerable also is the quantity of sugar in the urine; 6. on the contrary, the more numerous the accessions have been, and thus as usual, having lost a portion of their force, that is, the more the cachexia becomes established the less the quantity of sugar excreted by the urine.

PERSONAL.—DR. J. B. TRASK, for the last two years one of the editors of this Journal, on account of occupations which require all his leisure, has withdrawn his name and editorial aid for the present. He will continue his assistance as a contributor.

DR. MC. CORMICK, whose name appears on the title page, has become my colleague; he has been too long known to the profession, both civil and military, to require any introduction to our readers. D. W.

TO OUR DEBTORS.—Those in arrears on subscription, are urgently requested to remit at their earliest convenience.

Communications of every description will reach us by being addressed to *Pacific Med. and Surg. Journal*, San Francisco. Money may be sent through the P. O. in registered letters at our risk.

DR. TRASK, (former editor of this Journal,) has opened an office, as Oculist and Aurist. We will take this occasion, in taking leave of our friend, to remark that he *thoroughly* understands the anatomy, physiology and pathology of the organs to whose treatment he has specially committed himself.

INCOME OF MEDICAL MEN.—In ancient times some remarkable fees were obtained for professional services. It is related of Charmis, who kept a bathing establishment at Rome, in the reign of the Emperor Claudius, that his regular charge for advice to those who were anxious to avail themselves of his treatment was £800. He was the first water-cure doctor, if we may credit the researches of Dr. Doran, that ever practiced, and he made an immense fortune, such as no brother of the craft of the present day can at all approach.

The most liberal fee of modern times was that received by Dr. Dinsdale, a physician of Hertford, England, for inoculating the Empress Catherine, at whose request he visited Russia, in 1768. The operation was perfectly successful, and such was the gratification of the Empress that she made Dinsdale a baron of the empire, besides presenting him £12,000, and a pension of £500 a year.

The largest fee ever received by Sir Astley Cooper was 1000 guineas. His patient was a man of the name of Hyatt, a retired West India merchant,

who was affected with stone in the bladder. The manner in which the fee was presented is worthy of notice. When Hyatt had entirely recovered from the effects of the operation, he requested his surgeon, with his two medical attendants, Dr. Lettsom and Dr. Nelson, to visit him on a particular day. Cooper arrived after the physicians had left the room; he met them down stairs, discussing the liberality of their patient, who had presented each with £300. Sir Astley was cordially received by the old West Indian, and after having chatted a little while, he rose to take his leave, and had got as far as the door, when Hyatt threw his night-cap at him, saying at the same time, "There, young man, put that into your pocket." Upon examining it he found a check in it for 1000 guineas.

Hyatt, it would seem was equally liberal to his apothecary, or regular family attendant. One day, being sent for in haste to visit his patient, he fell down and hurt his knee, so as to cause him, on entering, to be lame. Hyatt, observing his condition, immediately exclaimed, "Dobson, old fellow, what is the matter?" On learning what the trouble was, he pulled out a £100 bank note and applied it to the joint, adding that it was the best plaster in the world for a bruised knee.

A wealthy London merchant, Mr. William Cole, paid Sir Astley Cooper annually, for years, £600, for attendance upon his family.

During the hey-day of his professional life Sir Astley Cooper frequently made 100,000 dollars a year by his practice. Much of this sum was received for chamber practice. He had to answer many letters of advice, for which he never received less than a one-pound note, while many yielded him five times that amount.

Dr. Lettsom, who was a West Indian by birth, made, in a visit which he paid to Tortola, his native town, soon after having completed his studies in London, nearly £2000 in five months. After he had succeeded in establishing himself in the British metropolis, his income annually ranged from 20,000 to 25,000 dollars. In 1800, he received in fees £12,000, or sixty thousand dollars.

Fothergill, the Quaker doctor, did an immense practice. For the last twenty-five years of his life, his fees annually averaged nearly £7000, or about 35,000 dollars. He commenced his practice in 1740.

Mead's income was, on an average, from £5000 to £7000, for many years. He once received 300 guineas for visiting a patient at Ingestree, in Staffordshire. The patient had been very ill, but recovered before the arrival of his great physician.

Dupuytren's income was enormous; he began life as a poor boy, and died worth more than a million of dollars. Graefe, the celebrated surgeon, of Berlin, left an immense fortune, the result of his professional labors.—*North Amer. Medico-Chir. Review.*

**LABOR WITH UNBROKEN HYMEN.**—Dr. John Yule communicates to the *Boston Medical and Surgical Journal*, a case of labor of extreme medico-legal interest. The patient was Irish, 18 years old, and had been ten months married. On examination the hymen was felt to be in a state of cartilaginous hardness, and no aperture into the vagina could be found by the finger. The membranes were felt through the rectum, protruding into the vagina. In two hours they burst, passed down the hymen, but only produced a slight moisture on the external parts. An orifice was sought for with a probe; but in vain. The hymen, however, seemed to have been thinned by the process of labor, for on pressure being now made by the finger, it was broken, the waters escaped, and the child soon followed.—*Nashville Journal of Medicine and Surgery.*



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THE  
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Selections.

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From the Cleveland Med. Gaz.

**On Detecting and Diagnosing the Simpler Forms of  
Valvular Diseases of the Heart.**

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BY JARED P. KIRTLAND, M.D., PROF. OF THE PRINCIPLES AND PRACTICE OF  
MEDICINE, CLEVELAND MEDICAL COLLEGE.

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STOKES informs us, that "the diagnosis of the combination of diseases, even in so small an organ as the heart, is still to be worked out."

His remark, applied to a complication of the diseases of that organ, may with some modification, be correct; yet the converse of it is equally true, in its application to the simpler forms of valvular derangements of the same organ. They are as easily detected and distinguished, one from another, as are the several abnormal conditions of the lungs.

When once mastered, they form the starting point for investigating and analyzing the more intricate and complicated disorders. A perfect method, infallible under all circumstances for effecting such a purpose, is perhaps still to be worked out; yet an experienced practitioner, accustomed to overcoming the difficulties attendant on determining the simpler, will ultimately attain a tact at diagnosing the more complicated forms, with a certainty not warranted by this sceptical view of Dr. Stokes. His work on the heart,

abounding with practical and valuable information to the experienced, invariably discourages the efforts at advancement of new beginners in our profession. A little more confidence diffused in his pages would have exerted a beneficial influence in imparting encouragement to the student. Every science has its elements. They must be first understood by the investigator before he can become a proficient. As a teacher, I have, from long experience, found the following epitome of the signs and evidences of valvular disease to afford medical students as much aid as does the gamut to the learner of music.

By taking it for our guide, and bringing to our aid an accurate knowledge of the anatomy and physiology of the organs of circulation, every valvular sound may not only be located to the particular orifice of the heart where it originates, but the nature of the impairment can be inferred with a great degree of certainty.

The correctness of several parts of this epitome was satisfactorily established by testing, on the person of E. A. Groux, during his recent visit to the city of Cleveland. The malformation of his chest afforded peculiar facilities for the purpose.

VALVULAR DISEASES are attended with *eight* murmurs—four are *direct*, arising from resistance to the onward progress of the blood; four are *regurgitant*, arising from the falling back or regurgitation of a portion of the blood through a defective valve.

1st. Aortic orifice may give origin to two sounds:

a *Direct*. It occurs with the first sound of the heart; is more distinct at the semilunar valve, and over the course of the aorta, than over the apex of the heart and the ventricles; is often attended with a purring murmur. Where strong and harsh, it may be heard along the whole course of the aorta as far as the bifurcation. *Pulse*, unless great contraction exists at the aortic orifice, is not much affected. Its *pitch* or *key* sounds in unison with whispered R.

b *Regurgitant*. Occurs with the second sound of the heart; is most evident over the aortic valves. *Pitch* lower and louder than preceding, and is in unison with whispered AWE. *Pulse* regurgitant and preeminently jerking, seldom accompanied with a purring murmur. The sound is prolonged through both the beat and the interruption of the pulse, and often becomes musical.

2d. Pulmonary orifice may give origin to two sounds:

a *Direct*. Same as the aortic; it is heard more on the right side of the sternum, and is more superficial. *Pitch* or *key* is a little higher, like whispered S. *Pulse* not affected as it is on the left side; the purring murmur may occasionally be heard. Diseases of this orifice are comparatively rare, and should not be suspected unless well marked and distinct signs exist.

b *Regurgitant*. Signs same as aortic, except in their locality. *Key* or *pitch* a little higher; of rare occurrence.

3d. Mitral orifice may give two sounds:

a *Direct*. Accompanies the second sound of the heart; *pitch* or *key* low, like whispered WHO; never becomes purring and harsh. *Pulse* feeble, irregular, unequal and intermitting; of rare occurrence.

b *Regurgitant*. Accompanies the first sound of the heart; *pitch* or *key* like whispered WHO; may become rough and rasping; is most evident at the apex of the heart, or a little above, at the sternal side of the nipple. While at this point, the aortic sounds are always feeble and indistinct. This murmur often drowns the first sound of the heart, and is more frequently *purring* than any other of the valvular sounds. If the regurgitation be considerable, the pulse will be the same as in the contraction of the mitral orifice.

4th. Tricuspid orifice may give two sounds :

a *Direct*. Sounds the same as the mitral, *mutatis mutandis* ; never sufficiently strong to afford much murmur. *Pulse* not affected.

b *Regurgitant*. Sounds same as mitral, changing locality ; extremely rare.

Justice to the memory of my departed friend and colleague. Professor Worcester, requires that I should acknowledge myself indebted to him for the first suggestion of the above epitome of signs and evidences of valvular disorders.

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From the British and Foreign Medico-Chirurgical Review.

### On the Action of Salts upon the Red Corpuscles of the Blood whilst in Circulation.

BY DR. BOTKIN, OF MOSCOW.

THE mesentery of the frog was found most convenient for watching the influence of these agents, partly owing to the want of pigment and partly by reason of the superficial bifurcation of the blood vessels. A drop of solution of chloride of sodium (15 per cent.) being added, a change in the circulation is remarked previous to any narrowing of the calibre of arteries and veins. The interspaces between the single blood-corpuscles disappear, the corpuscles being interrupted in movement and irregularly round. In some of the smallest vessels a complete plugging up occurs, whilst in neighboring larger ones the circulation is obviously accelerated. In a few minutes the smallest vessels plugged up begin to show a movement which extends to them from the vessels still retaining blood-movement, so that they gradually become freed from their plug of corpuscles, and in about half an hour completely resume their usual condition. If, after the formation of such a plug, one covers the preparation with water, the process of plugging is immediately arrested ; and on again adding some of the saline solution the above-described changes in the blood vessels extend to all the capillaries in the field of observation, and the capillaries of larger diameter become stopped up. The changes become observable in the veins and arteries, and in the last also an evident pulsation.

After some hours, on being left to itself, the circulation becomes reestablished (firstly in the large, and then in the small vessels,) but not to the original rapidity.

A stasis so produced can easily be dissipated by the addition of water ; but if some of the saline solution be added in its place, the circulation in the arteries immediately ceases, probably owing to interruption of the communication between the arteries and veins by means of arrest in the capillaries. At the same time a starting movement begins in the veins, by which at each systole the blood-corpuscles move from the periphery to the centre, and at the commencement of the diastole recede in the opposite direction. Finally, this starting movement in the veins passes into an unbroken stream from the centre to the periphery, at first being very rapid, and then becoming slower and slower, and altogether ceases. The veins and capillaries appear to be filled with blood, whilst in the arteries the movement continues.

From the Philadelphia Medical and Surgical Reporter.

**"Who suffers from the Quacks."**

SUCH is the title of an editorial note in a recent number of the *Lancet*. It seems that Mr. Jones, a tradesman not over-burdened with either money, wit, or wisdom, suffered himself, as many others like him in every respect do, to be imposed upon by quacks. When, however, his eyes were opened, and he realized that he had been imposed upon, he had the pluck to prosecute the impostors, and had them convicted and punished. The prosecution cost Mr. Jones three hundred dollars, and, as he could ill afford to lose the money, the magistrate before whom the case was tried led off in an attempt to reimburse the amount to him. Let it be remembered that this was a matter of lawyer's fees. If it had been a physician's or a surgeon's fees, the matter would have been very easily settled by Mr. Jones getting a receipt in full, and no loss to him, or appeal to the public. Lawyers must be paid for their precious services, whether physicians are or not! The *Lancet* says:

"Mr. Norton, greatly sympathizing with the pecuniary loss of Mr. Jones, the prosecutor of the Bennett and Watters gang, has suggested from the magisterial bench that the medical profession should defray those costs. He remarked that the profession were more interested than the public in the punishment of these rogues. We emphatically dissent from that dictum. If we have any interest in the matter, it is in their continued prosperity. These *logati vultures* prey upon the public; but to the great body of medical practitioners they act rather as jackalls than vultures. They terrify, they injure, they sicken the healthy; they keep constantly before the eyes of those who are well and sound, gloomy pictures of probable disease and death; they identify the most ordinary symptoms of derangement, or even natural physiological conditions, with the precursors of horrible and loathsome maladies. A headache, a pain in the back, a thickness in the urine—the habitual indications of momentary indisposition, they loudly, publicly announce as the forerunners of disease. If the nervous man blushes or the idle man yawns, if the student is sensible of lassitude, or the laborer of fatigue, he learns from them that these sensations are the awful warnings of imaginary and shadowy evils. Not one of us but has profited by the groundless fears with which these scoundrels have thus, for their own base purposes, inspired young men; for they frighten thousands whom they do not attract. It is true that medical practitioners have combined, earnestly and energetically, to denounce and to prosecute these fellows. But if they have done so, it is because they are actuated by the highest and noblest motives; it is because so shameful a desecration of an art which has in it a sacred element outrages their feelings; it is because they are not content to stand idle and see the wrong done, of which they alone know the full extent. It is not our interest, and it is doubtful whether it can be called our duty, to avenge the wrongs done to others, and which are profitable to us. But it is the interest of the public to protect themselves from the injury which such herds of impostors habitually inflict. It is for the rich, who suffer less from this plague, to help the poor, who suffer most from it, and who suffer in ignorance. The prosecution of these men should be undertaken by a society of laymen; and it is to the general public that Mr. Jones should be able to look with confidence for reimbursement of the few score of pounds which he has expended in relieving them from a gang of impostors who levied an annual tax upon them of nine thousand a year, to the detriment alike of their pockets and their persons."

We heartily endorse every word of the above. Whether it is so in England, we know not, but in this country one of the most potent engines used

by quacks to *frighten* the people into purchasing their medicines, is the publication of medical pamphlets, sometimes under cover of an almanac, or treatise on hygiene, and in books addressed particularly to women, and *secretly* sold to them. In these works, revelations—many of them fully illustrated—of the most abominable, loathsome and filthy kind are made. The result is fairly stated in the quotation from the *Lancet*, above. It has been our experience, and we presume it is that of many other practitioners, to be called to patients, and have them go to a sly corner and take from its hiding place one of these abominable books, and thrust it under our nose, with “dogs’ ears” turned down here and there, to places which they fancy describe the malady under which they labor.

Homœopathy and hydropathy have used this engine for advancing their interests, with great diligence and success. They owe their very existence, in great measure, to a judicious use of their “manuals.”

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From the London Lancet

### Birth of a Child through a central rupture in the Perinæum.

As is well known to every accoucher, when the perinæum is ruptured during labor, it is generally from before backwards. It sometimes happens, however, that instead of the laceration occurring in that manner, the perinæum is perforated at its centre by the head, and the child is born through this opening without passing by the os externum or vaginal outlet. This is a very rare form of injury, and is noticed in Dr. Rigby's “System of Midwifery,” p. 113.

At the present time there is a young woman in St. George's Hospital, who was recently confined of her first child (illegitimate.) She was in labor from two o'clock in the morning until five in the afternoon; the head had well descended, and the perinæum was carefully supported by a practitioner attending upon her, who observed that there was no disposition for the vaginal outlet to dilate, and permit the head to be born; but the perinæum was enormously distended. Suddenly the centre of the perinæum ruptured, and the head forced its way through, followed by the body of the child. Birth, therefore, took place without emergency from the os externum. She was subsequently admitted into St. George's Hospital, and is now under the care of Mr. Pollock. She was examined by Dr. Robert Lee, who observed that he had not seen a similar instance, and that it was one of great rarity. The edges of the rupture were brought together by Mr. Pollock; but the sutures ulcerated through, and now suppuration is going on between the lips of the wound. The rectum and anus are intact. The rupture commenced in front of the anus, and extended in two directions—on the right side beyond the vagina in an oblique direction, and on the left to about half the distance, leaving a tongue-shaped flap of integument pointing towards the anus. The parts have, however, considerably contracted since her labor, although the longest wound is nearly three inches in length.

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**EMPLOYMENT OF THE SALTS OF LEAD IN PHTHISIS.**—It having been lately announced that the saturnine medication had proved beneficial in tubercular disease, several practitioners have given their experience to the various medical journals of France, and all deny its efficacy. Of three cases reported by one gentleman, two had died, and one was worse than before the treatment. Another says that he made use of the carbonate of lead in but two cases; in these the marasmus and debility were instantly aggravated, and the medicine was obviously injurious.—*Phil. Med and Surg. Reporter.*

From the Medical Times and Gazette, Oct. 1, 1859.

## Official Report of the Last Illness of His Majesty King Oscar the First, of Sweden,

### *And of the Post-Mortem Examination of the Body;*

Translated from the original, by WILLIAM DANIEL MOORE, M. B., of Trinity College  
Dublin, Honorary Member of the Swedish and Norwegian Medical Societies.

THE examination of the body of the late King of Sweden took place, by command of his present Majesty, Charles the Fifteenth, at the Palace of Stockholm, on the 12th day of July, 1859, at 10 o'clock in the forenoon. A large number of the great Officers of State, and of members of the medical profession, having assembled in accordance with summonses issued by His Excellency Count Lewenhaupt, Marshal of the Kingdom, and the latter high functionary having given permission for the commencement of the business of the day, P. O. Liljewalch, First Physician in Ordinary, read the following:

### *Report of the Last Illness of His late Majesty King Oscar the First.*—

The late King was, with the exception of the chest, not strongly built; nevertheless, during the greater part of his life, he enjoyed tolerably good health. Having, as a youth, passed through a severe typhus fever, he was, in full manhood, attacked by rheumatic fever; both diseases, however, went through their ordinary course without leaving behind them any injurious consequences. His Majesty was therefore able, on ascending the throne, to devote himself, with indefatigable industry and undisturbed health, to the functions of his high calling, and this he did with a zeal indicative of the keenest sense of duty. In the commencement of each spring, however, a troublesome irregularity in the heart's action not infrequently occurred. Still the morbid symptom was generally not of long duration, but yielded in a short time to gentle measures; and as His Majesty almost every year during the milder season made excursions to remote parts of the country, or to the Kingdom of Norway, and most frequently did not return to the capital till late in the autumn, his system regained, through country air and the increased exercise attendant on his excursions, what it lost during the winter by hard work, often continued to a late hour of the night, combined with a more sedentary life. But in the course of the year 1851, his health became seriously implicated; the heart's action was constantly irregular, digestion was impaired, and the liver increased in size. The most important central organ of the nervous system, too, showed unmistakable traces of exhaustion, and absolutely required rest. In consequence of this, His Majesty repaired, in the summer of 1852, to the baths of Kissengen, and at the end of his stay at that watering place made a tour in Switzerland, returning to Sweden in the autumn, cured of his liver complaint, and with his health in other respects also improved. But now his paternal heart was smitten with the sad loss of a beloved son, and in a short time the Royal parent lay on the sick bed, suffering from the same disease which had opened the grave for his bitterly lamented child. A particularly tedious typhoid fever now for many weeks threatened His Majesty's life, but finally terminated in convalescence, which, although slow, gave hopes of a future complete restoration to health. These expectations were, to a certain extent, fulfilled, and would, no doubt, have been completely so, had not the political circumstances of the time laid too strong a claim upon His Majesty's exertions, and determined him to neglect the care of his own person in order to devote himself wholly to the protection of the interests of the two nations, whose welfare constituted the highest

object of his sense of duty. The over-exertion of the mind to which His Majesty consequently subjected himself, the omission or curtailment of his summer tours, and the neglect of a necessary visit to the baths, at last told upon him, and in the beginning of 1857 his health again began to give way in a manner calculated to cause great uneasiness, with evident congestion of blood to the head. The lower extremities, the muscles of which were always weak, began to totter under the weight of the body, and at the same time that the power of combination for the motions of these parts was impaired. His Majesty was troubled with vertigo, particularly accompanying the movements of the head, and with vomiting, which symptoms, in combination with diminution of strength and the occurrence of involuntary muscular spasms, indicated the existence of a more deeply seated affection, probably a softening in the central nervous system. Incapacity to discharge his Royal functions now brought on a deep melancholy, and His Majesty even in the commencement of his illness expressed his conviction of its incurability. Although this conviction could not, unfortunately, but be participated in by those who were privileged to be His Majesty's Physicians, we did not at that time consider it our duty publicly to express it. The means employed to combat the disease were, moreover, without any essential efficacy; the paralysis, which commenced in the lower extremities, gradually increased, and after the King feeling his inability any longer to fill the high position to which Providence had called him, transferred into the hands of his then Royal Highness the Crown Prince, the Government of the United Kingdom, his deep melancholy gave way to a progressive indifference, even for those things which in his health he had regarded with the most lively interest. The disease henceforward progressed slowly towards its end, and the paralysis began so steadily to extend to the other voluntary muscles, that towards the end of last June both lower and upper extremities, and the sphincters of the excretory passages were almost entirely paralyzed, while involuntary spasms from time to time agitated the right leg. The appetite, too, had now disappeared, and, although digestion continued undisturbed, the body had greatly emaciated, while the hitherto superficial bed sores, which had often been nearly healed, and had already existed more than six months without causing any great pain, began to extend and to assume a gangrenous appearance. Under all this the patient's strength gradually sank; the power of speech, previously very limited, latterly was altogether lost; the lungs filled with mucus, which, in consequence of incipient paralysis of the muscles of respiration, could only with increased difficulty be expectorated; and on the eighth of July, at eight o'clock in the morning, His Majesty quietly expired, supported in the arms of his Royal consort, who during his more than two years' illness never left his side, and surrounded by all the other members of the Royal Family, kneeling with her and weeping bitterly around the death bed of the never-to-be-forgotten and long tried head of their illustrious house.

The first trace of the nervous disease, the development of which I have now described, and which brought the late King to the grave, manifested itself long since, although it was not until within the last six or eight years of His Majesty's life, that, as we have seen, it occurred with more definite, and at last with such threatening symptoms. No one who had the good fortune to approach His Majesty's person, and who had an opportunity of observing him during a long period in his daily intercourse, could avoid being amazed at the very extraordinary power His Majesty always exhibited of retaining in his memory the most varied details, or could cease admiring the rapid apprehension, the unerring judgment, and the singular clearness of statement which were exhibited whenever he spoke. But at the same time he could not fail to recollect how His Majesty sometimes in the middle of a conversation to which he was directing all his attention, would of a sudden appear to be abstracted, and would really transfer his thoughts to some other subject on



which, unless he might be disturbed, he would allow them to rest, usually only for a few moments, but sometimes for many minutes; after which the conversation would be resumed, as if it had not been interrupted. The peculiar expression of His Majesty's features, particularly his look assumed on such occasions, and the spasmodic state, or the involuntary movements which at the same time took place in one or other part of the muscular system, render it probable that this distraction, which at times was of frequent recurrence, was due to an incipient affection of the central organ of thought. This symptom, referable to the most important organ of the nervous system, was of late years accompanied, as has already been mentioned, with increasing weakness in the muscles of the lower extremities, and with uncertainty in the combination of movement, probably depending on a commencing organic change, either in the organ alone, on which the power of motion depends, or also in that by which the harmonization of movements is affected. The anatomical investigation which is now about to be made will show, whether any discoverable change of structure exists in the central parts of the nervous system, or whether the disturbance of function has taken place without the naked eye being able to detect the seat or nature of the change which must be supposed to be present when the function of the organ is deranged. This examination ought also to demonstrate what morbid change has taken place in the structure of the heart, as a cause of the irregular movements to which this organ was occasionally subject.

Before I close this brief report of the late King's last illness, I ought to observe that Professors Huss and Malmsten took part in the treatment from the commencement of the disease, and that Professors Conradi and Heiberg were called into consultation from the Kingdom of Norway, as Professor Faye, the Norwegian Physician in Ordinary of his late Majesty, was at the time on an extended foreign tour. It should likewise be mentioned, that the treatment of his Majesty's disease was, during two months of last year, intrusted to Dr. Kuylenstierna, to ascertain whether animal magnetism [!] might not have some beneficial influence, after the attendant Physicians had stated that the restoration of His Majesty's health lay beyond the power of art.

P. O. LILJEWALCH,

First Physician in Ordinary to his late Majesty King Oscar.

STOCKHOLM, July 12, 1859.

As a preparatory step, the Royal remains were, with a view to prevent decomposition, on the ninth of July, at one o'clock in the afternoon, injected with an arsenical solution. The following observations were on that occasion made as to the *external appearance of the body*. The Royal corpse, which was at once recognized by all present, and the features of which presented a tranquil expression, was found laid on a table in the late King's bed-chamber. Cadaveric rigidity existed only in the joints of the right knee and foot, and in the under jaw. The whole body was greatly emaciated. The tuberosities of the long bones and ribs, and the spinous processes of the vertebral column were prominent. Over the entire back and the upper part of the posterior surface of the thigh were slightly livid spots. On the left side of the nose about an inch and a half from its point, and close to its dorsum, was a small abrasion, said to have occurred after death in the removal of a cast of the face. On the front of the legs, (*antibrura*), but chiefly on the left limb, were found some light brown spots, varying from the size of a pin's head to that of a pea. These spots were in some places distinct, in others they were confluent, and were not raised above the surface of the skin. On the right side, over the lower edge of the sacrum, towards the anus, was an oval dark brown spot, an inch in length, and above it and continuous with it was a yellowish, somewhat larger, semilunar, similar spot, both together forming the mark of an imperfectly-healed bed-sore. On the left side, in a spot corresponding to that just described, was a bed-sore three inches in length by two in breadth,

on which the slough still remained. Over the right os ilium, about at its junction with the sacrum, was a superficial abrasion, three-quarters of an inch in length, and on the spinous processes of the seven inferior vertebræ (lumbar and dorsal,) were similar, but still smaller abrasions.

After the foregoing inspection, the left carotid artery was opened, and into it was injected, towards the heart, about a pound and a quarter of finely elutriated arsenic, four pounds of distilled water, and five pounds of rectified spirit of turpentine, impregnated with essential oils. The incision made in the skin was then united, and the Royal corpse was replaced in bed.

In fidem protocolli,

DR. A. HILARION WISTRAND.

The foregoing having been read, the post-mortem examination was made on July 12, by Professor Baron von Duben, assisted by Professor Santesson and Prosector Loven. With respect to external appearances, the following additional observation was made: The Royal corpse has not during the last few days undergone any other change than the formation on the anterior surface of the right shoulder of some reticulated, grayish brown spots (*vibices*.) The slough on the bed-sore already referred to, on the left side over the sacrum, is found on incision to extend in the centre to the depth of one and a half lines, and at the edges to the depth of one line; while the cutis vera, as well as the subjacent adipose tissue is, to a certain extent, infiltrated with blood.

*Inspection of the Internal Parts.—Head.*—The scalp is pale and deficient in blood. The cranium is thin, with very little, almost no medullary substance; its inner layer exhibits deep impressions left by the vessels and *glandula Pacchioni*, rendering the skull in some places very transparent. Small, fine osseous granulations are found in the course of the vessels on the inside of the cranium (*osteophytes*.) The dura mater is strongly adherent to the inside of the skull; it is everywhere thickened, particularly towards the falx cerebri, and is adherent to the arachnoid and pia mater in the course of the longitudinal sinus. After the separation of the dura mater, the cerebral mass swells out and exhibits the arachnoid and pia mater tolerably full of blood and healthy, with the exception of a somewhat thicker edge along the longitudinal sulcus, whence on both sides proceed numerous Pacchionian granulations. The convolutions of the cerebrum are flattened, so that the sulci between them are almost wholly effaced. The color of the cerebral mass on the surface is pale gray with a slight tinge of red. On pressure over the lateral ventricles, evident fluctuation is felt. On section the cerebral mass appears of a grayish white color, and is tolerably copiously studded with sanguinous dots. The lateral ventricles together contain rather less than three ounces of somewhat turbid serum: they are considerably dilated, particularly the posterior cornua. Their inner investment, with two or three lines of the adjoining cerebral mass, is softened and pale, resembling coagulated milk (*emollitio alba*.) In the posterior hemispheres of the cerebrum this white softening extends on the right side nearly an inch, on the left side nearly an inch and a half, reckoning from the walls of the ventricles; forming foci of *ramollissement* on the right side of the size of a small walnut, and on the left of that of a hen's egg. The septum lucidum is also for the most part softened. The corpus callosum is likewise softened. The choroid plexuses are pale and compressed. The other parts of the cerebrum exhibit no morbid change; the blood-vessels are healthy and open.

On taking out the cerebellum its right half is found, for the extent of more than an inch, attached to the dura mater by means of old, firm adhesions; in this part the mass of the organ is of a reddish-brown color, and is somewhat swollen, containing a tumor of the size of a small hen's egg, which is easily distinguishable from the rest of the cerebellar mass, and on section

is seen to contain a round cavity, half an inch in diameter, imperfectly filled with a shrivelled pale pellow, broken down, fibrinous coagulum; the cavity is surrounded by a fully organized sac of connective tissue. Around this the cerebellar mass is found, to the extent of fully half an inch, softened, infiltrated with blood; and on microscopic examination appears broken up and mixed with coloring matter, granular cells and corpuscles. The rest of the substance of the cerebellum is healthy.

The pons Varolii and the medulla oblongata exhibit no morbid change. The inner lamina of the skull is also, at the base, rough with small osseous granulations. In the right receptaculum cerebelli, where the adhesion already mentioned existed, the dura mater is easily separable from the bone, which underneath it is found to be rather cribriform and corroded. In the foramen magnum, the odontoid process of the second cervical vertebra is felt to be very prominent.

*Chest.*—The integuments of the thorax contain a layer of fat about half an inch thick. All the cartilages of the ribs, especially of the superior, are ossified. The thoracic viscera retain their normal relative situations. Each pleural sac contains about four ounces of dark red serum. Both lungs are free, distended with air, full and rich in pigment. In the apex of the left lung is a small cicatrix, slightly drawn under the surface. In other respects the lungs are perfectly sound. The pericardium is rather abundantly covered with fat, and contains a couple of spoonsful of dark red serum. The right side of the heart is also somewhat loaded with fat, and its walls are thin and have undergone some fatty change. The valves and orifices of the right side are healthy; the papillary muscles are particularly small. The left ventricle is somewhat dilated; its walls are of rather less than ordinary thickness; the trabeculae and papillary muscles are thin and flat, the latter at their apices are changed into connective tissue. By this tissue the efferent tendons are partly united to one another. The mitral valves are somewhat attenuated and short, but are otherwise healthy. The semilunar valves of the aorta have undergone morbid change, the right valve being along the whole of its free margin thickened, and as it were doubled, by an excrescence one line in height, comb-like, filamentous at top, and running along the inner surface of the valve. Farthest to the right is a conical calcareous excrescence, adherent at the base, the base of which extends somewhat into the ventricle. The two other semilunar valves are joined to one another, the septum between them having almost disappeared. These valves are, moreover, considerably thickened, contracted, and somewhat convoluted. The free valve is one and three-quarters; those which have grown together are exactly two inches in breadth. The greatest width of the left ventricle is eight inches. The aorta immediately above the valves is four and a half inches in circumference. The walls of the auricles are particularly thin.

*Cavity of the Abdomen.*—In the abdominal integuments is a considerable layer of fat, one inch in thickness. The peritoneum is healthy, but on each side is an external inguinal rupture, capable of admitting three fingers laid together. The omentum, one-sixth of an inch in thickness, covers the abdominal viscera, which occupy their normal positions, and do not exhibit any morbid adhesions. The stomach, almost empty, is rather thick anteriorly towards the pylorus; the mucous membrane in that part is slightly hypertrophied; the coats of the stomach are otherwise everywhere sound. The intestinal canal contains in its upper part thinner, in the lower part more solid mucus and brownish-green excrementitious matters; the small intestines are healthy; on their mucous membrane at the ilioæcal valve, and about three inches upwards, the mouths of the glands are open, and the membrane itself is there particularly thin and clammy. The large intestine is throughout healthy. The mesentery is rigid, with a layer of fat three-

quarters of an inch thick. The pancreas is healthy. The liver is very small, especially its left lobe; its substance is close and hard, but without any trace of cicatrix or cirrhotic change. The liver is eight inches broad, seven high, and three and a half thick. The gall bladder contains about a teaspoonful of dark brown grumous bile. The spleen is somewhat turgid, but exhibits no morbid change. The kidneys are imbedded in a layer of fat a couple of inches in thickness, which extend into their pelvis; their substance is healthy. The ureters are open and healthy. The renal capsules are also healthy. The urinary bladder contains a couple of tablespoonsful of turbid urine; its walls and mucous membrane are healthy; the third lobe of the prostrate gland is somewhat enlarged.

*Cavity of the Spinal Column.*—The medulla spinalis is surrounded by a great quantity of fat; its membranes and substance are healthy. Nothing else worthy of note was observed.

Visum, repertum,

Stockholm, July 12, 1859.

GUST. VON DUBEN.

The pathological changes above described, compared with the symptoms detailed in the history of the case and in the published bulletins, lead to the following conclusions as to the connection between them :

1. The irregularity of the heart's action, which for many years was sometimes more, sometimes less troublesome, depended on the existence and growth of the morbid products found in the aortic valves, which, arising in the course of the rheumatic fever mentioned in the report, subsequently continued and increased, causing attenuation of the wall of the left ventricle and dilatation of its cavity. These morbid products, although discoverable by means of the stethoscope, were by the efforts of nature in time smoothed and modified, so that the heart was able to discharge its functions, although less regularly and perfectly.

2. The distraction of mind described in the report, which was observed for many years back and was connected with more serious symptoms, subsequently developed signs of congestion of the head and diminution of strength, finds its explanation in the morbid changes of the dura mater, which, in consequence of an insidious chronic inflammation, extending likewise to the inner table of the skull, was both thickened to an unusual degree, and became adherent on the one side to the skull, and on the other to the arachnoid and pia mater, and through them to the outer surface of the superior convolutions of the brain.

3. The extravasation of blood found in the right half of the cerebellum, which, from its character, as above described, and its effects on the subjacent bone, appears to have been of long standing, probably took place at the same time, or the commencement of the year 1857, betraying its origin by the increase of the before-mentioned cerebral symptoms, and by the supervention of vertigo and vomiting, and manifesting its continued influence in the derangement observed in the muscular movements, particularly of the lower extremities, and in the want of control over these movements.

4. Soon after the softening, found on dissection, began to be developed in the cerebrum, the posterior lobes, the walls of lateral ventricles, the septum and corpus callosum, with consequent effusion into the ventricles and dilatation of the latter, which change was characterized in its commencement by the increasing morbid apathy, and afterwards by the progressive paralysis of the voluntary muscles, and finally of the excretory passages and the muscles of speech and respiration.

5. Lastly, it may probably be inferred that, as no other sign of inflammation was found in the body, the recent inflammatory process, of which the

results were observed around the old clot of blood in the right lobe of the cerebellum, was the right cause of the feverish symptoms which occurred during the closing period of his Majesty's illness, and which were mentioned in the published bulletins. Consequently these feverish indications and the post-mortem appearances left by the inflammatory process, on which they depended, are to be regarded as the latest symptomatic and anatomical phenomena in the present case.

Verified, ex-officio,

GUST. VON DUBEN.

DR. A. HILARION WISTRAND.

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From the Dublin Hospital Gazette.

### Cerebro-Spinal Meningitis.

BY ROBERT MAYNE, M.B.,

*Lecturer on Practice of Physic at the Carmichael School of Medicine, and  
Physician to the Hospitals of the South Dublin Union Workhouse.*

THE disease which forms the subject of the following observations has been latterly of rather unfrequent occurrence in Dublin. Some years ago it was observed in an epidemic form in many parts of Ireland, having previously committed great ravages in France. It subsequently visited America, presenting pretty much the same characters as it had assumed in the old world—the same symptoms, the same fatality, and the same difficulty as regards cure. In France this disease committed its greatest ravages amongst the conscripts who had lately joined their regiments at the great military depots. In Ireland it carried off several of the boys in some of the workhouses, and it also proved fatal in Dublin to many adults, amongst whom were several of the Metropolitan Police.

In the following case, which recently fell under my observation, the patient was an infant at the breast, *only four months old*; and this circumstance, together with a very remarkable train of symptoms, invests it with extraordinary interest.

The history of the case may be briefly told. The infant's mother had been reduced from comfortable circumstances to a state of extreme destitution, shortly before her admission. She attributed her child's illness to prolonged exposure to cold; and it was certain that for several hours the child had been exposed to very inclement weather, almost in a state of nudity, and that from the time of its exposure its illness dated.

The earliest symptoms observed were, a sudden attack of extreme collapse, during which the infant became icy cold, and appeared to the bystanders to be dying. Restoratives of various kinds were used; heat was freely applied to the surface. The child gradually revived; and when at length reaction had fairly set in, it was brought to the workhouse hospital.

At my visit, next morning, I was informed that the infant had never ceased screaming during the night. I was greatly struck with its appearance, nearly all the muscles of the extremities and back being in a state of rigidity. In the extremities, neither the flexor nor the extensor muscles were exclusively affected, but both sets were evidently engaged in the mischief. Thus the right elbow-joint was permanently extended; the left was rigidly

semiflexed. In the lower extremities the flexor muscles preponderated over the extensors, for both thighs were forcibly bent upon the abdomen, and both legs were forcibly bent upon the thighs. In the fingers the flexor muscles predominated over the extensors, both hands being firmly clenched. In the lower extremities matters were somewhat different, for the toes remained permanently extended. The muscles at the back of the neck were so contracted and so rigid, that the head was drawn backwards until the occiput very nearly touched the spine, and the face was directed upwards.

In addition to all this, the child was seized, from time to time, in the affected muscles, with convulsive spasms of great severity. These were sure to be excited by the most trivial causes, such as the gentlest touch, the most trifling change in the child's position, or the slightest exposure of its surface to cold air by the removal of the bed-clothes. To judge by the infant's screams, these spasms must have been accompanied with fearful suffering. In the intervals between the spasms its features were tranquil, but during the paroxysms there was a mixed expression of pain and terror in the countenance, admirably depicted by Mr. Connolly, in a drawing which still remains in my possession.

Owing to the frequent recurrence of the spasms, there was great difficulty experienced in nursing the child. In the intervals between the spasms it sucked greedily, but during the paroxysms the nipple was rejected. The mother complained that the child was so sore, she could not touch it without producing convulsions; and therefore, abandoning all attempts to take it in her arms, she laid it on the bed, covered it lightly with a blanket, leaving the face alone exposed; and by bending over it in this position, she contrived to suckle it sufficiently.

The fever that accompanied these symptoms was very considerable. The skin was burning hot and dry; the tongue was furred; the pulse was greatly accelerated; the bowels were torpid; and the urine, as far as it was possible to judge, appeared scanty.

That the principal mischief was seated in the spinal marrow, and not in the brain, was inferred from the absence of special cerebral symptoms. There was no stupor, but quite the contrary, for the child was intelligent, recognized its mother, and sucked readily. Besides, the pupils were sensitive to light, and perfectly equal in point of size; nor was there the least tendency to strabismus.

The nature of the disease having been readily recognized, a line of treatment found useful in such cases during the epidemic visitation in the year 1846, was assiduously pursued. Leeches were applied, one at each side, to the mastoid process, and were repeated at intervals of twenty-four hours, as long as the child's strength permitted. Small and repeated doses of calomel were administered, until the green evacuations from the bowels warned us to desist; small quantities of mercurial ointment were, at the same time, placed in the axillæ, with the view of introducing the mercury into the system through the skin. Sinapisms, succeeded by small blisters, were applied in succession over nearly the entire length of the spine. After the mercurial plan had been pushed to the utmost, quinine and wine, as advised by some of the French authorities, had a fair trial, but without any perceptible benefit. All was, in fact, without avail.

At one time, about the fourth day of the child's illness, some hopes of its recovery were entertained, the spasms having become less frequent and less severe. This calm was, however, of short duration; the rigidity of the muscles continued; emaciation set in rapidly; the child began to suck imperfectly; at length it refused the breast altogether, and threw up quickly from the stomach whatever fluid had been given it by the spoon. Contrary to all

expectation, it lived on for many days, evincing extraordinary tenacity of life; and at length, after a struggle of three weeks' duration, it died on the twenty-first day of its illness.

The *post-mortem* examination was made as early as six hours after death, in order to guard against cadaveric changes. The theca vertebralis, when fairly exposed to view, appeared, even at the exterior, unduly congested, and a very large quantity of fluid blood escaped from the vertebral canal as the laminae of the vertebræ were removed. When the theca vertebralis was slit up, its inner surface was found of a vermillion-red color, and so was the pia mater investing the cord. Along the entire length of the cord, at intervals, large deposits of greenish lymph were discovered. Close examination showed that these were mostly seated in the subserous tissue, although here and there the free surface of the spinal arachnoid was very manifestly smeared with the same material.

Although at first sight the brain appeared to be healthy, yet a critical eye would have detected some undue vascularity of the cerebral hemispheres. At the base of the brain, the pons varolii, the medulla oblongata, and the adjacent portions of the cerebellum, were smeared with lymph in abundance—a sufficient proof that the inflammation had extended sensibly to the cranial cavity, although the brunt of the mischief had been borne by the membranes of the cord.

Although this terrible disease is not very likely to be confounded with any other, yet mistakes in its diagnosis are not impossible.

To ordinary tetanus it bears some resemblance, in the permanent rigidity of large groups of the voluntary muscles, and also in the spasms which at intervals attack them.

It must be almost unnecessary to trouble the reader with a detail of the distinctive marks whereby two diseases differing from each other so essentially as tetanus and cerebro-spinal meningitis do, may be discriminated. I may remark in passing, however, that in the case just described, the severe collapse at the commencement, followed by high inflammatory fever, was suggestive of local inflammation, and not of tetanus.

I may add, that the rigidity affected extensor and flexor muscles indiscriminately, that the hands were clenched, that the abdominal muscles were soft and pliant, that the muscles of the face were unaffected, that the tetanic expression of countenance was absent, that the lower jaw moved freely from first to last, as was clearly proved by the child's ability to suck and to swallow to the end, and that in all these particulars the disease differed from the ordinary lockjaw.

Myelitis, or inflammation of the nervous material of the cord, is more likely to produce paralysis of the muscles supplied with nerves from the affected part, than to render them rigid or convulsed; moreover, a great diminution of the tactile sensibility of the skin is apt to be the result of myelitis, whilst an extraordinary exaltation of the same function, constantly accompanies the spinal meningitis.

In infants, cases now and then occur which are calculated to tax our diagnostic skill to the utmost. In the year 1846 when cerebro-spinal meningitis was rife in Dublin, an infant was brought into the workhouse hospital presenting many of the symptoms of this disease; the attack was sudden, and had been ushered in by profound collapse; there was high inflammatory fever present; the head was retracted forcibly upon the vertebral column, and there were from time to time convulsive fits, in one of which the infant died. So much was my mind at the time running upon the prevalent epidemic, that in all these symptoms I saw nothing but so many indications of cerebro-spinal meningitis. After death, notwithstanding the most minute

and careful examination of the brain, the spinal marrow, and their membranes, I failed to discover in any of these parts the slightest trace of inflammation, or indeed of any organic disease.

The child had died of acute pericarditis!

Similar cases have occurred in the practice of some of our ablest physicians, and have been recorded by Doctor Watson and others, the symptoms leading to the belief that the nervous centres were the special seat of the disease, inflammation of the heart being all the time at the root of the mischief.

When Andral is not ashamed to acknowledge such a mistake, it is unnecessary for me to defend myself!

The truth is, that during infancy the nervous centres are so irritable that acute inflammation of such a vital organ as the heart is apt to produce reflex irritation of extreme severity—so severe, indeed, that the secondary irritation in the nervous centres outruns and masks the primary disease in the heart; and thus the real mischief comes to be overlooked, in our anxiety to treat symptoms which are only accidental.

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From the Jour. für Kinderkrankh., & Dub. Hosp. Gaz., Vol. XV., No. 1.

### On the Question of the Affinity between Scarlet Fever and Measles.

BY DR. KUTTNER, OF DRESDEN.

WE see occasionally, in the same individual, parts of the skin presenting the scarlet-red eruption, while in others the rosy rash of measles exist. We have, then, not merely examples of transition, but we see cases which may be termed hybridous. If we were even disinclined to assign any relationship to the two diseases, arising from the fact of their passing in to each other, there is still another observation which shows it in a higher degree,—namely, that the same contagious matter appears capable of producing, in differing individuals, different diseases; in some measles, in others scarletina. Many reliable proofs of this are to be found in medical literature, to which the following may be added, as affording good examples:

During an epidemic of measles, a boy of sixteen years became affected with the disease, which ran a favorable course, and at the end of three weeks he was sent from Dresden to his father's country house, at some distance from the city. A little sister, two years of age, who visited the brother on the day of the appearance of the rash, although immediately sent away, sickened on the tenth day, presenting the ordinary symptoms of the eruptive fever; in her, too, the disease passed over mildly. A second sister, one of the older members of the family, who had before repeatedly attended upon persons in measles without taking the disease, did not now escape. There yet remained a third sister, who was married, and who had been for fourteen days on a visit to her father's house, but who, from never having had measles carefully avoided intercourse with the sick and the convalescent, not, however, guarding against the possibility of transmission through a third person. Without any previous indisposition, sharp febrile symptoms appeared in this case, leading to the belief of the invasion of measles. An intense scarlatinal eruption, however, manifested itself, with the characteristic affection of the throat, and with the red tongue. The exanthematic period passed over without any remarkable symptoms, ending in the second week with an



extensive exfoliation of the epidermis. No second case of measles or scarlatina occurred in the house.

Although observations such as these have been made by practical physicians, and recorded, still this is worthy of notice, from the concurrent circumstances, and because the course of the disease was so characteristic as to leave no doubt as to the correctness of the diagnosis.

In what relation scarlatina and measles stand to each other, and whether the same contagion can, in reality, produce both forms of disease, we are scarcely in a position to determine. A sceptic will naturally say, that the scarlatina of the last named case was not the product of the contagion of measles, but was developed independently.

Admitting, however, that a direct proof to the contrary cannot be given, the fact nevertheless remains, and no communication from without, capable of conveying scarlatina, took place. Is it in reality so preposterous a notion, that the matter of the exanthematic contagion may act like a ferment, without any specific character, and, according to individual disposition, may produce measles in one case, and scarlatina in another, as, under similar conditions, the impression of cold may cause in one individual catarrh, and in another rheumatism?

### Compound Fracture and Dislocation of the Astragalus.

A MOST unusual and singular form of injury to the foot is to be seen at Guy's Hospital, under Mr. Bryant's care. It occurred in a man fifty years of age, who has the look of a person of sixty. In getting off an omnibus, he fell, and so injured his foot that the astragalus was dislocated and forced through the skin forwards and outwards, and hung by a piece of membrane to which it was attached. On examination, this bone was discovered to be fractured, in addition to its displacement; it was therefore removed altogether. Both malleoli were intact. Although the man's general health was not favorable, he is doing well. Ice was assiduously applied after the injury, and opium given internally, and now the wound has all but healed by suppuration, and he may have a useful foot.

In such injuries to the foot as the one referred to, it is usual to encounter fracture of the tibia or of one of the malleoli, according to the manner in which the foot has been twisted at the time of the accident.—*London Lancet*.

**CURE OF VESICO-VAGINAL FISTULA BY LIQUOR AMMONIÆ.**—The *Lancet* says: We are anxious to record an instance of the cure of vesico-vaginal fistula by the application, direct to its edges, of the liquor of ammonia. The case occurred in St. Bartholomew's Hospital, in June last, under Mr. Lloyd's care. The patient, who was twenty-six years of age, had been the subject of a fistula of the kind mentioned since her confinement in August of last year, and was, as is usual, much troubled and inconvenienced by the continual dribbling of her urine. A catheter was kept constantly in the bladder to relieve this condition, and the caustic ammonia was applied to the edges of the fistula, situated rather high up the vagina; and this was repeated a few times, with the effect of causing perfect closure, so that she was enabled to get up and walk about the ward without the escape of any urine into the vagina. On passing the finger into this passage, a deep indentation could be felt in the situation through which the urine had so long passed. She left the hospital, apparently cured, many weeks back. There can be no doubt, as we heard Mr. Lloyd remark recently, that the parts have been well tested by this time, and that the cure is complete.

From the Nashville Journal of Medicine and Surgery.

### Unprofessional Advertisements.

—, Dec. 13, 1859.

EDITORS OF THE NASHVILLE JOUR. OF MED AND SURGERY:—

GENT.:—Our national code of Ethics would seem to be sufficiently comprehensive, yet on two points some reputable physicians manage somehow or other to play the quack, "and save their bacon too," viz., rendering professional service by the year at a sum stipulated in advance, and in advertising.

In reference to the first, the Kentucky State Medical Society delivered a very distinct and unqualified reprobation some years ago. The committee which drew up that report (on Medical Ethics,) deserves the thanks of every true physician. I am not aware that any other State Society has taken action on the subject, and am not sure but good service might be rendered the profession by the republication in some of the journals, of so much of the report as relates to this matter. It will be found in the Transactions for 1852, pp. 58 and 59.

As to the second point, some queer things turn up in looking over the daily and weekly newspapers of the country. One now before me informs the public that "Dr. P. has had eighteen years experience in the profession, *seven* of which have been in the West." Another says, "From an extensive practice in the *South and West*, he feels confident of meriting a share of the patronage of the community. References: *Hon. A. B., Hon. C. D., Rev. E. F., Prof. G. H., Rev. I. J.*" The italics are mine.

But the richest lately seen is the following *Surgical Notice*:

"Dr. [K. L.] would inform the people of —, that he has returned from a protracted visit to the great hospitals of Dublin, Edinburgh, London and Paris, and will attend to calls from any part of the State accessible by railroad, to operate for lithotomy, amputations at the ankle, knee or elbow, shoulder or hip-joints, or any of the operations with which the physicians of the interior have not become familiar. *References required.*

"For those who require the operation for lithotritry, *stricture*, or operations upon the *eye* or *ear*,—cases which cannot be attended to at their homes—good accommodations can always be procured in—[the city of his residence]

"A full set of lithotritry instruments for sale, much below the American or English prices: Paris made—best quality.

"*Without asking permission* he refers to Mr. M. and N. and P. and Q. and R. and S., T. W., *Esq.*, Judge V., *Hon. W.*, and X. Y., *Esq.*" The italics, except the prefixes and affixes to names, are his.

How do you think such advertisements comport with sections 3 and 4 of chap. 2, art. 2, and sec. 1, and of chap. 2. article 5, of the national Code of Ethics?

These advertisements are not from irregulars. nor obscure members of the profession. One is from an individual who would take offence at being placed any where below the head of the profession in the State where he resides. I would be glad to see your views on these matters in your Journal, which circulates pretty extensively in the region from which the advertisements emanate.

Truly yours,

DEAR DOCTOR :—We have from the very founding of this Journal assailed in no minced phraseology, the medical rascalities to which you call our attention. In this latitude no medical gentlemen would recognize the "advertising doctors." Even the people in this State, and, we believe, the South generally, use the terms "quack doctor," and "advertising doctor," interchangeably. The idea of an advertising mountebank regarding himself as at the head of "the profession," is rich, racy and delectable. The idea of a fellow darting over to Europe, where—

" \* \* at Vienna or Versailles,  
He rives his father's auld entails,  
Or by Madrid he takes the rout,  
To thrum guitars and fetch wi' mowt;  
Or down Italian vista startles,  
W—e hunting amid groves o' myrtles,  
Then bouzey drinking German water,  
To make himself look fair and fatter,  
And clear the consequential sorrows,  
Love-gifts of carnival Signoras,"—

and then hastening back and pretending to be the greatest doctor since the flood, has been played out long ago.

We delight to see medical gentlemen avail themselves of every opportunity of obtaining information, both here and in the Old World. But they must take pot-luck with their brethren. If they are superior in skill, time, not newspapers and certificates (for a reference is nothing else,) must prove it.

God, not opportunity, makes a man, and no one can long substitute the former for the latter, and his attempt to do so, proves clearly his own doubts of his manhood. Drake nor Gross neither went to Europe, nor called attention to themselves through the newspapers. Let practitioners every where combine to keep every case they can out of the hands of "advertising doctors." To practice by the year is to sell one into slavery, and to degrade Medicine, which with Law and Divinity, was held to be a profession of **FREE-MEN**.

From *Gaz. Med.*, No. 46.

### Action of Alcohol upon the Economy.

ACCORDING to the usually-received opinion, alcohol introduced into the circulation by absorption from the alimentary canal, becomes rapidly destroyed by combustion with the oxygen of respiration. Carbonic acid and water may be the immediate results; or, as is more generally admitted, the alcohol passes through a series of transformations, representing derivatives more and more oxygenated, as aldehyde, acetic acid, oxalic acid, and, finally, carbonic acid. The results of a series of experiments instituted by MM. Duroy, Lallemand, and Perrin, point to different conclusions. According to these, alcohol is not destroyed in the blood, since it may be found in all the liquids and the tissues, while the products of combustion are not found there; and, moreover, it is eliminated by the various channels, as the lungs, the skin, and especially the kidneys. They conclude—1. That alcohol is not an alimentary substance, it acting only as a modifier of the nervous system. 2. It is neither destroyed or transformed in the economy. 3. It becomes especially concentrated in the liver and in the brain. 4. These facts explain the production of certain organic and functional changes in the liver, brain, and kidneys.

## Communications.

### Dentistry, etc., in Paris.

BY GEO. SUCKLEY, M. D., U. S. ARMY.

PARIS, Dec. 23, 185—.

IN a late letter I gave you the history of the triumph of certain modifications in surgery introduced into France by American surgeons. I propose, to-day, to give you a *resume* of American industry abroad, giving the place of honor, on account of its extent, to dentistry. I ought to mention first, however, that Dr. Bozeman's operation has been adopted so rapidly, that it is declared by the best surgeons of Paris as the only operation to be practiced hereafter for the malady which it is destined to remedy; and we thus see a young American surgeon introducing into France, and at the great seat of medical science, a certain cure for a malady which the most distinguished surgeons of two centuries have sought for with but indifferent success. In their notices of Dr. Bozeman's operation, however, the surgeons who have thus far lectured upon it, have not failed to give credit to other surgeons who were more or less successful in the cure of the accident in question. Thus, in Europe, Diffenbach and Jobert have been particularly successful in its treatment, M. Jobert claiming to cure one-third of his cases by a very simple operation; while in America, Dr. Hayward of Boston, as long ago as 1828, performed the operation successfully, and to him is due great credit for the modifications he introduced. To Dr. Simmes, also, of New York, credit is given for his improvements in this operation within late years, while astonishment is expressed that Dr. Simmes should so singularly designate himself in a public address as the instrument especially selected by Providence to discover a cure for a malady which had been already cured even in his own country while he was yet in his infancy. I ought to mention here also that the practice of local etherization by means of electricity is becoming general as well in surgery as in dentistry. It is felt that all that is required to generalize this practice is a better knowledge of the particular cases to which it is adapted, and of the manner of applying it; and regret is expressed by the French surgeons that they have not access to the experiments and the experience of American surgeons.

I will not pretend to explain why dentistry in Europe is so far behind that in the United States. It is most singular that, in France, where surgery and the accessories of the toilet have been brought to the highest perfection, the art of the dentist should have been left so completely in the rear. Until very

lately, the art was ranked among the lowest of trades; a dentist was in fact but a puller of teeth, and one of the commonest expressions in French is, even to this day, "*Il ment comme un arracheur de dents!*" (He lies like a dentist, or a tooth-puller.) It was not until American dentists settled in France that the art was at all respected, or indeed deserved to be respected.

Mr. Brewster was the pioneer of American dentists in Europe. He settled in Paris in 1836, and soon became the dentist of Louis Phillippe, the Czar Nicholas, and other monarchs. He was bought out by Mr. Thomas W. Evans, of Lancaster, Penn., in 1850, who, with his brother Theodore, now continues the business. These gentlemen not only maintain the position ceded them by Dr. Brewster, but they have extended it. They are the dentists to the courts of France, Russia, Bavaria, Wurtemberg, and, I believe, of Belgium and Saxony. With such high protection it may readily be conceived that the practice of these gentlemen is immense. Besides the Legion of Honor granted to the elder brother by the Emperor of France, both the brothers have received decorations and rich gifts from the other monarchs by whom they are employed. They have just built on the Avenue de l'Imperatrice a private residence, which is an ornament to that new and elegant thoroughfare.

Mr. James Fowler, formerly a partner of the deceased Harvey Burdell, afterwards established in Bleecker-street, New York, came to this city four years ago, and went into business as a dentist on the Boulevard des Italiens, in partnership with a French merchant by the name of Preterre, the latter furnishing the funds for the establishment of the house. At the end of three years, however, Mr. Fowler sought and obtained before the tribunals a dissolution of the partnership, and at once established a new house in the Place de Madelaine. Since his residence in Paris this gentlemen has made several pieces in gold for the replacement of lost parts, which excited the astonishment and the admiration of the Academy of Medicine and of the entire faculty of Paris. Among these were an entire lower jaw in gold with the teeth affixed, several upper jaws, obturators, etc. Although not new in America, it was the first time that any successful attempt of the kind had been made in Europe; and Mr. F. is now in the enjoyment of a first-rate reputation and practice. Mr. Preterre obtained a workman from the United States of the name of Fowler, and is continuing the business at the old place under the name of Fowler & Preterre.

Mr. Horner, of Philadelphia, is a partner in the long-established English house in the Rue de Luxembourg, which now bears the name of Stevens, Watson & Horner. This is the largest and richest dental establishment in the world, its income reaching \$60,000 a year. Gold work, however, has only been introduced into this house since the entrance of Dr. Horner. Previously, their artificial pieces were made of hippopotamus entire, and decayed teeth were filled with amalgams—the ancient French and English system.

Dr. Gage, formerly of Mobile, has also established himself in Paris as a dentist, and like the other, is doing a good business.

Mr. Potter, an American dentist, who has practiced in Bombay and in Lisbon, has been for some years established in this city, and lately took into partnership a dentist of New York, Mr. Crane.

Dr. Parmly, formerly of New Orleans, an elder brother of Dr. Eleazer Parmly, of New York, has been practicing dentistry for three years past, upon children in the schools of Paris and London, till an attack of typhoid fever, followed by partial paralysis, disabled him from the active pursuit of his profession. He continues to reside in Paris, however, and gives advice to families and schools in regard to the care of the mouth in young people.

A gentleman who announces himself to the public as an American dentist, Dr. Koth, "formerly of the United States, late dentist to Her Majesty the Queen of Spain," has established himself in Paris, within a month. Dr. Koth, according to his circular, speaks English, German, Spanish and Swedish; but judging from the Doctor's name, we think he ought to have commenced his enumeration of languages with the Swedish.

As I was passing rapidly in a carriage, a few days ago, through an obscure quarter of the Faubourg St. Germain, I had a hasty glance at a sign which had evidently just come from the painter's hands, and which bore the words, *Dentiste Americain*, preceded by a name of the purest Gallic origin. So, you see how the current is running.

So wide-spread is the reputation of American dentistry, that the teeth of nearly every monarch in Europe are filled, pulled and replaced by Americans, or *soi-disant* Americans. Thus, as I have already mentioned, the Evans' of Paris, are the dentists to the courts of France, Russia, Bavaria, Wurtemberg, and some other smaller States. At Rome, Dr. Burgess, an American, is the principal dentist; at Madrid it is Dr. McKeehan, another American. The principal dentist of Berlin is Dr. Abbott, of Bangor, Maine, while the court dentist is a German who studied in America, and who calls himself in consequence an American dentist. At Vienna, where it is almost impossible for a foreigner to get permission to do business, Dr. North, also of the State of Maine, has rapidly gained the first position among the aristocracy, although he has not yet arrived at the court. When he first went to Vienna, Mr. North was obliged by the police restrictions from giving any publicity, either by advertisements or by a sign at the door. While stowed away privately in the upper part of a house, wondering whether his enterprise was going to fail or succeed, he was one day surprised at receiving the visit of Prince Lichtenstein, who came to get work done. The American complained of the rigors of the police, and the Prince said to him, "Never mind the police; take a house to suit you, put your sign out, and if they trouble you come to me." Mr. North did as the Prince advised; the Prince sent his daughters and others of his relatives and acquaintances, and from that day the fortune of Dr. North was a fixed fact. He numbers now in his protectors not only the Lichtensteins, but the Metternichs and the Scharzenbergs.

In St. Petersburg, the aristocracy employ two Irishmen, brothers, who studied their profession with Dr. Brewster, at Paris, and who call themselves American dentists.

The principal dentist at Hamburg is Dr. Cohen, who studied in America, and calls himself an American dentist.

The brothers Tellander, who studied dentistry in New York, do the court and the principal business in Stockholm and Christiana, the capitals of Sweden and Norway.

There are a few other dentists scattered through the German Confederation, Germans by birth, who received their professional education in the United States, and who call themselves American dentists.

In London, Mr. Rann, an American dentist, has rapidly reached a large practice, in exclusively aristocratic families. Another American, whose name I forget, has also arrived at a large practice in London. At Manchester there has been an American dentist for a good many years. This closes the chapter on dentistry.

Two American physicians are in practice in Paris, Dr. Bigelow, of Boston, and Dr. Beylard, of Philadelphia, both graduates of the School of Paris. The latter gentleman, however, is of French origin; he was two years house physician in the wards of Dr. Trousseau, at the Hotel-Dieu. Both these gentlemen are doing well, but fortunately for the small American colony in Paris, their business is not confined exclusively to their countrymen.

We have no American lawyers in Paris, although we need one. But we have two ministers and two places of worship regularly established. The chapel built by the Americans in the Rue de Berry last year, continues under the pastoral charge of the Rev. Mr. Seeley. The Episcopalians, however have organized a congregation and secured a place of worship in one of the upper rooms of the Church of the Oratoire in the Rue St. Honore. From a dozen members, three months ago, this new congregation has reached nearly a hundred. It is called the American Episcopal Chapel in Paris, and its pastor is the Rev. W. O. Lamson, late of St. Paul's Episcopal Church, New York.

The number of American artists now in Paris is extremely limited. Mr. Kellogg is still occupied on Oriental subjects. Mr. White is painting a picture for the State of Maryland—"Washington Resigning his Commission." Mr. May has a variety of subjects on the easel. Mr. Cranch has gone to Italy. Mr. Fagnani, the sculptor, late of New York, has fixed himself permanently on the Champs Elysees, and is engaged on busts. Mr. Thompson, the American photographic artist, and photographer to the Rothschild family, continues on the Boulevard des Italiens. An American daguerreotypist has lately established himself in the Rue du Faubourg Poissoniere.

Of bankers, we have in Paris three American houses, John Munroe & Co., Lansing, Baldwin & Co., and Green & Co. The latter house, which suspended two years ago, will resume business again the first of January at the old place, Place St. Georges, under the title of Vanderbroeck, Green & Co.

Since the Great Exhibition of 1855, several American inventions are manufactured on a large scale in France. Of these the most important are McCormick's and Manny's Reapers, the Vulcanized India Rubber of Goodyear, (which has acquired an immense extension, and employs daily several thousand men,) the Sewing Machines of Singer, and Grover & Baker & Co., and of Wheeler & Wilson, Tucker's Artificial Marble, Pitt's Threshing Machines, Chamberlain's Cork Cutter, and a variety of other inventions.

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PARIS, Monday, Dec. 13, 185-.

American ideas and American inventions continue to occupy the public attention in France. The application of electricity in the annihilation of pain during surgical operations is just now the exciting topic of the hospitals. This idea of employing electricity as a local anæsthetic agent is due, I believe, or at least is attributed here, to Dr. Francis, a dentist of Philadelphia.

At first, this idea was received at Paris with distrust, and a certain distinguished Professor of the Faculty, in making his first experiments at the Hospital Hotel Dieu, prefaced his operations with the remark that, "this was an American invention, and the class must not have too much hope of its success!" And in effect the success was not very gratifying, but the operations were performed by a sort of charlatan, a *soi-disant* American dentist, whose manipulations did but small justice to the invention. Subsequent experiments, however, practiced by other and more skillful hands, demonstrated to the Faculty that in the extraction of teeth, not decayed beyond a certain point, the annihilation of pain was complete, and this discovery has passed into the art of the dentist, as a useful and indispensable agent. Every dentist in the city has adjusted or is adjusting a battery to his operating chair.

But the experiments did not stop at the extraction of teeth. Limbs were amputated, tumors removed, painful incisions made, under the influence of this agent. The first experiments of this kind were entirely without effect. But, as in the case of the extraction of teeth, the operations were awkwardly performed. Thus, M. Velpeau, in a resection of the arm, applied one pole of the battery to the cutting instrument, and the other to the opposite arm of the patient, thus passing the whole current of electricity through the patient's body, producing a double suffering. Subsequent experiments were more successfully performed, but good results seem more difficult of attainment in these operations than in the extraction of teeth, and there is a probability that they will be abandoned for a return to general anæsthesia. M. Marjolin, however, of the Hospital St. Eugenie, who has been most successful both in the extraction of teeth and the performance of surgical operations, is continuing his experiments in the latter class of operations, and he maintains that, as a local anæsthetic, electricity is susceptible of a useful application.

Dr. Bozeman, of Montgomery, Ala., the inventor of a valuable improvement upon Dr. Sims' operation for recto-vaginal and vesico-vaginal fistulas, lately arrived in this country, and has performed his operation here twice —



once on the *cadaver*, in presence of M. Nelaton, the distinguished surgeon of the Hospital of the Faculty, and subsequently in presence of Messrs. Nelaton, Robert, Verneuil, and an immense audience of surgeons and students, in the large amphitheatre of the Hotel Dieu, on a patient in the service of M. Robert. M. Robert had twice operated on his patient and totally failed. To the astonishment of the French professors, Dr. Bozeman's operation succeeded. The operation has created a veritable enthusiasm in the minds of those who saw it, and M. Nelaton at once charged himself with the duty of reading a detailed report on the subject before the Imperial Academy of Medicine, and he, as well as Professors Roberts and Verneuil, has declared it the only rational operation for the very difficult and terrible accident it is destined to remedy. No longer ago than Saturday, M. Verneuil delivered a lecture on the subject before his class, at the *Ecole Pratique*, and extolled the operation as one of the most important modifications lately introduced into surgery. After the discussion which will soon take place at the Academy on the subject, the operation will no doubt be generally adopted. The young Alabama surgeon before arriving in France, had already performed his operation four times in the hospitals of England and Scotland, once in the service of M. Erichson, at London, once in the service of Mr. Baker Brown, also at London, once for Mr. Simpson, at Edinburg, and once for Mr. Buchanan, at Glasgow. All these gentlemen adopted his operation at once, and have since practised it, Mr. Simpson insisting upon a modification, however, (which he always does) of using iron instead of silver sutures. The modification in this case is certainly not a happy one; nevertheless he had operated twice since in this way with success. I ought to add that the case of instruments used by Dr. Bozeman, and manufactured by Mr. Tiemann, of New York, were not only much admired for their originality and ingeniousness, but for the very clever workmanship displayed in their manufacture. M. Charriere, the well-known Paris instrument-maker, is now making cases precisely similar for the French surgeons whose names are mentioned above. Dr. Bozeman went home in the last trip of the *Persia*.

But this is not all. We have still another triumph before the French School of Medicine, which naturally finds its place here. You will recollect that two years ago in this place I gave an extract from a speech of M. Trousseau, the distinguished Professor of Clinical Medicine to the Faculty of Paris, in which he declared that the assertion of Dr. Horace Green, of New York, that he had introduced into the larynx a sponge probang for the purpose of cauterizing that organ, was an error and an illusion, and that neither Dr. Green nor any other man had ever performed that operation on the living subject, nor probably ever would. I am now happy to announce in justification of Dr. Green and in honor of American science, that Dr. Trousseau not only loudly proclaims the contrary, but has become himself an operator. You will naturally ask, what has wrought this great change in the mind of the distinguished doctor of Hotel Dieu? I cannot enter into all the details here, but the position of M. Trousseau will be understood when I inform you that the Academy of Medicine has been occupied for the last five sittings on

the subject of the direct application of medical substances to the mucous membrane of the larynx in the treatment of croup, after methods discovered by two prominent medical men of this city, Messrs. Loiseau and Bouchut, and that it is the noise made over these names which has brought M. Trousseau to the admission in regard to Dr. Green. M. Trousseau has made his reputation on diseases of the larynx, and he is naturally ambitious to retain the foremost place in that specialty. M. Loiseau invented a method, quite different from that of Dr. Green, it is true, to reach the mucous membrane of the larynx with medicinal substances; while M. Bouchut invented a tube which he inserts into the opening of the larynx to allow the child to breathe, where otherwise it would suffocate. Through this tube also medicinal substances are passed. These gentlemen, totally unacquainted with the practice and the published work of Dr. Green, claimed to be the first to demonstrate the practicability of attacking directly the mucous membrane of the larynx, and then M. Trousseau cried out in the open Academy of Medicine, "No, gentlemen! it was neither you nor I who first demonstrated this practice! It was Dr. Horace Green of New York, who demonstrated it twenty years ago!" Professional jealousy brought out the truth.

M. Trousseau is now cauterizing the larynx, himself, after M. Loiseau's method — that is to say, through a canula which is introduced into the larynx along side the index finger which has first been placed there, and which is protected from the child's teeth by means of a metal sheath which covers and protects the whole of the third phalanx of the finger.

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## Electricity in the Treatment of the Diseases of the Ear.

BY DE COURCILLON, M. D.

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OF all the local agents employed in the treatment of the diseases of the ear, electricity is, undoubtedly, the least efficacious, although, perhaps, the most praised, not only by physicians, but by patients who seem to expect every thing from it. Of course, charlatanism takes advantage of the popular credulity upon that point as upon every other, and electric batteries are busy working, if not the cure, at least the money out of too plethorous pockets.

Great things, it is true, may be expected of electricity for the relief of deafness; still, I am afraid our knowledge of its therapeutic application and effects upon the organ of hearing is so limited, that it must take some time before it be made to work the wonderful cures so much wished for.

They have endeavored to establish an analogy between the electric fluid and the nervous influx, and hence, the therapeutic effects of this powerful

remedy have been praised without measure. The Abbe Nollet (1) struggled against such an unfounded induction, and the propagators of the contrary opinion, Bertholen, (2) Manduyt, (3) Comus, (4) Poma and Brainard, (5) could not countenance their assertions with good substantiating reasons. Relatively to deafness, it can not be denied that electricity has a very marked action upon the acoustic nerve. It has been inferred that it ought to contribute to restore the sensibility of the ear, and it has particularly been used in cases of nervous deafness.

Manduyt (6) treated ten deaf patients with this means, considered heroic, and only one seems to have been slightly benefitted. Cavallo (7) asserts that electricity cures every kind of deafness, but he gives no proof for his assertion. Lebourrier Desmoutiers (8) says that by this means he has restored the hearing to a deaf and dumb girl, but a short time after the cure the child was in as bad a condition as before the treatment. Hufeland (9) published in his *Journal* a great number of cures of deafness, but most of them could not stand a minute and severe criticism; for with some the deafness was but intermittent, and with the others the disease was but recent. Busch, of Marbourg, (10) has treated with electricity a man sixty years old, and after ten sittings, the disease appeared to be destroyed. It is very probable that in that case there was but a simple obstruction of the Eustachian tube. There remains to be known how far the electric fluid can liquify the mucosity accumulated in that passage. So far, nothing proves that it does. Lentin speaks of the advantages which can be derived from electricity combined with stimulating injections, but he confesses to his not having had the opportunity to make the necessary experiments.

The French aurists of our times have taken but very little notice of these fine promises. Saissy (11) thinks that this therapeutic means is applicable but in cases of deafness from partial palsy. Itard (12) says that electricity is not of the least use in the diseases of the ear, and Deleau is of the same opinion.

Most of the aurists who believe in the efficacy of electricity against deafness, agree in saying that this agent ought particularly to be employed against the form known as "torpid," that is, from want of nervous action. But this species of deafness is rare, for Kramer during his long career reports only four or five such, of a hundred cases. The result of it is, that in the greater number of cases treated by electricity, the disease ought to be increased in the ratio of the violence of the excitement produced by that fluid upon an already over excited system. Kramer has constated the insufficiency of

1. *Encycl. art. Electricit.*, 1755.

2. *De le elect. du corps humain.*

3. *Mem. de la Societe Royale de Med.*, 1778.

4. *Journ. de Phisique*, 1775.

5. *Journ. de Med.*, Nov., 1787.

6. *Dict. des Sc. Med. art. Electricite.*

7. *A Complete Treatise on Elect.*, Vol. 9.

8. *Consid. sur les sourds mutes de naissance.*

9. *Journal vii.*

10. *Auseitrag zur ausübenden Arzneiwissenschaft.*

11. *Essai, etc.*, p. 272.

12. *Traite, etc.*, b. y.

such a treatment upon two hundred and two patients affected with nervous deafness, and he adds, "I do not advise any body to try that remedy."

Considering electricity, galvanism and animal magnetism as emanations of the same power, it has been tried to render useful the properties of these different agents to ameliorate deafness. It has even been thought that mineral magnetism could be advantageous in such cases, but no fact justifies such an opinion. The introduction of a magnet in the meatus, or its application concentrated upon the pavillon, do not act otherwise than by the sensation of the metallic cold it imparts to the parts, and this can prove injurious.

As to galvanism and magnetism, they are very active agents, which have of late been of great repute in Europe. Magnetism and electricity have particularly been praised beyond measure. Here are the results constated by Kramer's experiments :

Generally the deafness to be attended was "nervous with noises." In such cases electro-magnetism has a very active, very irritating action upon the acoustic nerves. These effects are still more marked when the current is directed from the Eustachian tube to the meatus externus. The immediate effect of such a current is to produce acute pains in the ear, convulsive motions in the surrounding parts, and an increase of the faculty of hearing ; but such a happy change lasts but a few moments. If the same experiments are continued for a while, there is almost invariably increase of the noise and augmentation of the disease. It is plain to every careful observer that electro-magnetism does not act as a tonic, but as an irritant ; the acoustic nerves are violently over excited, and one can readily understand the result of such a medication. It is, then, of the utmost importance to use but sparingly and cautiously of such a therapeutic agent.

Mineral magnetism has been considered as a powerful means of cure of the deaf and dumb, whether their affection was congenital or acquired. Doctor Barrils, of Hamburg, who has experimented upon the deaf and dumb of the Berlin Institute, had signalled fourteen cures of fifty-eight patients, but I was enabled to constate (it is Kramer who speaks) that my watch was not at all heard, even applying it upon the ear of the two children which were reported as the brightest examples of such an astonishing success ; and, however, my watch is heard from a distance of thirty feet by people enjoying a healthy hearing. Baldinger, (1) Audrey, (2) and Thouret, have published nothing authentic on the subject. Becker, Bulmering, Schmidt, and Bahrdt, have experimented with the same means, but with the most complete failure.

Magendie, Jobert de Lamballe, Mesniere, have often employed electro-magnetism in certain forms of nervous deafness, but they never derived any good advantage from it. M. Dupotet, a celebrated magnetizer, was allowed to experiment upon the subjects of the Royal institute of the deaf and dumb

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1. *Opusc. Medic.*

2. *Beobachtungen und Untersuchungen über den Gibranch des Magnets, etc.*

in Paris, and the report of Magendie before the Academy of Sciences demonstrated the uselessness of the efforts of that individual.

Galvanism has been prized with enthusiasm by a certain number of learned men, who most of them have acted under the influence of a momentary impulse, without knowing what kind of deafness they intended to cure. Of course, their assertions do not deserve the least confidence. It is true that galvanism produces upon the acoustic nerves a very active stimulation, and Schubert explains thus the ease with which certain patients perceive a few sounds to them new. But such an improvement does not sustain itself; besides, it often happens that such a shock, repeated, aggravates the disease very rapidly. Itard speaks in about the same way upon that subject. Hence, it is safe to conclude that galvanism has never been of any authentic service in the treatment of the affections of the ear, while it is beyond doubt that it has frequently proved very injurious to the patients subjected to its influence.

Since practicing in San Francisco, we have collected a certain number of facts illustrating the ideas as advanced in the above paper. At the next opportunity we will publish them, and thus show the ill results of the abuse of electricity, etc., in California.

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### **Induration of and the Formation of Fibrous and Bony Tumors in the Corpora Cavernosa.**

BY H. H. TOLAND, M. D.

THIS disease has received less attention from English surgeons and pathologists than any other attended by such serious consequences. By referring, however, to the French authorities, I find it described in Boyer's celebrated work on surgical diseases, published in 1831, and in an article prepared by Blandin for the Dictionary of Medicine, published in 1841. It is only alluded to in Rokitanaky's Pathology, although it appeared as late as 1855.

In Boyer's work we find that tumors or a continuous induration sometimes form in the corpora cavernosa. In some cases they are arranged in the form of a chaplet, in others they are solitary, and either occupy one or both of these bodies. They may be situated near the junction of the corpora cavernosa, but generally they occupy an intermediate point between the root of the penis and the glans.

This affection, which Boyer considers not rare amongst men of advanced age, especially those who have been addicted to excesses, is most frequently a result of venereal affections. It is generally accompanied with pain, although sometimes during a strong erection a painful tension is experienced. The discharge

of urine is rarely impeded by their existence, but they always interfere with the erection of the penis and the ejaculation of the semen. If one of these solid tumors is situated near the centre of the right cavernous body, the penis, instead of being straight, inclines to that side; and if the enlargement or induration is on the left, the curvature is in the same direction. Should, however, the ganglion or chaplet of ganglions be on the inferior surface of the organ, it curves backwards or towards the perinæum, and it inclines upwards when it is located upon the superior surface.

Thus the curvature is always upon the side diseased, for the following reasons. Erection is supposed to depend upon the dilatation or distension of the cells of the cavernous bodies. When equally distended, one cannot pass the other, and, consequently, it must take place in a straight line; but if hardness or depression of any portion of either of these bodies exists, a dilatation of the cells of that part is prevented, consequently, that portion of the cavernous body which is contracted, hardened and depressed, will form the centre of the curvature.

When the induration of the cavernous body increases to a certain extent, the ejaculation of the semen is either both feeble and difficult, or altogether impracticable; hence the impossibility of impregnation under such circumstances.

Blandin remarks that authors have mentioned, and I have observed small tumors of irregular form and varying in size from a grain of wheat to a bean, situated in the course of one or both corpora cavernosa, ordinarily near the middle, either upon the superior or lateral surfaces, but sometimes near the root of the penis. These tumors resemble veritable ossifications of the fibrous tissue of the penis. Sometimes they form chaplets embarrassing both erection and coition, and even, if their volume be considerable, may prevent the free ejaculation of the semen. The penis presents during erection a curvature to the side affected, which proceeds from the impossibility of the development of the corresponding cells of the corpus cavernosum. We are not sufficiently acquainted, even at this day, with the pathological anatomy of these productions, to determine their true character, except what may be derived from their being both visible and sensible on the exterior. Elsewhere, we only find that inflammation of the corpora cavernosa, though of rare occurrence, is produced by contusions or gonorrhœal metastasis, which occasionally terminates in obliteration of the cells, and by means of the inflammatory product, in the conversion of the latter into a cellulo-cicatrix, by which the uniform turgescence of the penis in erection is thus permanently impeded.

Notwithstanding the opinion expressed by Boyer, that this is not a rare disease, particularly in persons of advanced age, the result of my experience has forced me to a different conclusion. Writers upon this subject have also confounded the obliteration of the cells, and, consequently, a diminution and induration of the cavernous bodies, with the development of either fibrous or bony tumors in the erectile tissue of this organ. Although the effect upon the function may be nearly the same, yet it must be apparent to the most

superficial observer that the treatment indicated is entirely different. In one, if subjected to the influence of proper remedies during the primary stage, the difficulty might be arrested, but if neglected until the cells are obliterated, they must prove entirely ineffectual; and in the other, although not amenable to medical treatment, no difficulty would be experienced in removing them with the knife.

The four cases which I have treated differ so much both in character and location, that I consider them worthy of publication.

#### CASE I.

In 1850, I was consulted by a temperate and healthy married gentleman, aged 50 years, for a difficulty which not only rendered erections both partial and imperfect, but also coition impossible. Upon making an examination, I found that the corpora cavernosa, near the pulvis, were indurated, greatly contracted, and not susceptible of erection. The diseased portion was smooth and regular in its dimensions, and not more than half the size of the healthy portion of these bodies when not distended. The difficulty was evidently produced by the obliteration of the cells, from which resulted the diminution in size and condensation that existed. He had neither indulged to excess, nor had ever suffered from any venereal or other affection from which it could have resulted. No pain was experienced during its progress, and his attention was only directed to the subject by the gradual but constant diminution of the capacity of the organ for the performance of its function.

#### CASE II.

M. M., aged 27 years, a strong and healthy laboring man, had a gonorrhoeal affection in 1857, which was neglected until the urethra became so contracted that he was compelled to obtain assistance. Some months after, he began to void his urine with difficulty, erections were incomplete, and a curvature to the right side was perceptible. I found, upon making a careful examination, that the urethra was not only contracted, but also that the corpora cavernosa were irregularly nodulated, although not diminished greatly in volume. On the right side the difficulty extended from the pubis to the glans penis, with the exception of three portions of less than half an inch of apparently healthy tissue. On the opposite side the disease was less extensive, but sufficient to render erections imperfect. The organ curved considerably, and to the right, as should have been expected. He was subjected to the treatment required for the removal of stricture, whilst a sufficient quantity of the Tinct. of Iodine was applied for more than two months, to the integument of the organ to produce considerable irritation with the hope of arresting the progress of the disease, even should its eradication be impossible. Mercurial ointment was then substituted, and continued during the time occupied in effecting a permanent dilatation of the stricture. Although not entirely relieved, he was greatly benefitted by the treatment, the function of the organ being impaired but not destroyed. The difficulty in this case evidently

resulted from the metastasis or extension by contiguity of the gonorrhœal inflammation from the urethra to the corpora cavernosa. This case differs greatly from the first, both in its cause, progress and character, and I may say, in its curability; it being highly probable that if it had been properly treated during the inflammatory stages, that no permanent inconvenience would have resulted.

## CASE III.

R. V., aged 31 years, contracted gonorrhœa in the summer of 1857, and had until recently some discharge accompanied with considerable urethral irritation. Great diminution and induration extend from the glans about two-thirds the length of the corpora cavernosa. Erections are partial and imperfect, the penis enlarging at the extremities, and is contracted in the centre. From the obstinacy of the difficulty, I am unable to determine at present the probable result. It may be as favorable as in the preceding case, since it was produced by the same cause.

## CASE IV.

A middle aged gentleman from the interior, after being absent from his family for several years, discovered, in 1858, two solid tumors about the size of a large bean on each side of the penis, near the glans, and imbedded in the corpora cavernosa. He being mentally greatly distressed by their presence, I determined, after satisfying myself that medical treatment would be of no avail, to remove them with the knife, to relieve the patient from the physical embarrassment as well as the mental disturbance they occasioned. When exposed, they were found imbedded in and closely connected with the erectile tissue of the penis. Although the hemorrhage was inconsiderable, the penis was discolored by the blood that escaped into the cellular tissue that connected the skin with the subjacent parts; which induced a physician who was called during my absence to prescribe for a temporary indisposition, to apply a large charcoal poultice, by which the wound was filled, and much difficulty experienced in its removal, as well as the cure retarded. This patient left the city soon after recovering from the operations, and I am unable to say whether he has been relieved entirely from the inconvenience resulting from the tumors. This case certainly differs greatly from the three preceding, and that they should have been confounded by such men as Boyer and Blandin, is certainly very extraordinary, and can only be accounted for by the fact that cases of this character occur very rarely, and have neither attracted the attention they deserve nor the consideration they will soon receive.



## Editors' Table.

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It is with much regret that I find even handed justice to myself obliges me to preface my salutatory address with an apology for the great haste in which it has been written on the eve of visiting a remote southern portion of the State, and yet a proper deference to the readers of the *Pacific Medical and Surgical Journal* renders it altogether proper that I should now speak, as I had not decided to become a coadjutant editor until but a few moments before the January number went to press. With this brief explanation I give my address, trusting to the kind indulgence of our readers.

Ac ne forte roges, quo me duce, quo lare tuter;  
Nullius addictus jurare in verba magistri;  
Quo me cunque rapit tempestas, deferor hospes.\*

Such, gentle readers of the *Pacific Medical and Surgical Journal*, is the motto I have selected from perhaps as rich a storehouse of wisdom as can be found in the wide range of classic literature, to inscribe indelibly upon my editorial banner before casting it to the winds of heaven.

On the occasion of unfurling it, I deem it but courteous and becoming the new position I have assumed, to say that in the requirements of the plain English version of my motto, I shall be under no obligation to swear in the words of any master, or, in plainer phrase, I shall be independent—yielding to no influences but those of justice and propriety—the most prominent of which, as regards strict justice and propriety, is, in the words of Cicero, “*Suum cuique tribuere.*”

Therefore, with a firm determination to give to every one his due, I embark in this enterprise with an earnest desire to contribute my mite to sustain a Medical and Surgical Journal on this coast, which will be at all times open to whomsoever may please to aid us in our laudable efforts to serve the profession by maintaining an independent Medical Press.

The governing principle above given I most devoutly hope may give rise to new contributors, and new exchanges may continue to flow in upon us, and thus infuse greater energy into the increased efforts we shall be called on to make, until our labors may at least be crowned with partial success.

To our medical friends of the army on this coast I will more particularly say, that perhaps the most prominent consideration that decided me to accept this position, was a sincere hope that in it I might be of use to them. To them I am better known, and they can fully rely on all my efforts in their behalf. From them especially I shall be at all times most happy to hear.

In conclusion, I beg leave to say, in the very milk of human kindness, I strive to be just to all—to form no entangling alliances with any person or clique—to maintain my own proper individuality, integrity, uprightness and honor—if it be possible for an editor to do so, and I fancy I can. I would be most happy to add, as a finishing touch, that I would wish above all things to avoid rising upon the downfall or ruin of any one, but a due discharge of honest and proper criticism, and a deadly aversion to plagiarisms, and especially when matter is glaringly taken from every day familiar authors, may imperatively demand of us remarks that would seem to contradict our own words, and I so abhor even the remote semblance of inconsistency, that I must give up the coveted finishing stroke, and thus leave ourselves free in the exercise of editorial criticism.

CHARLES McCORMICK.

\*Perchance you may demand of me who is my leader; who is my household god? I reply, I am under no obligation to swear in the words of any master. Wherever the storm casts me I am a guest.

HON. JUDGE MASON, of Iowa, who made himself so popular with the inventors of the country while he held the office of Commissioner of Patents, has, we learn, associated himself with Munn & Co., at the *Scientific American* office, New York.

As Commissioner of Patents, Judge Mason had not his superior, and we congratulate the *Scientific American* upon having secured the aid of such rare talents and great ability, united in so well balanced a mind. MCC.

NECROLOGY.—Beyond controversy, civilization tends to longevity within certain limits. In a civilized state, the rich live longer than the poor. In this there is no cause for murmur when the story of Dives and Lazarus is remembered. But it cannot be denied that uniformly good living is better than uniformly poor living. It is undoubtedly true that large apartments are vastly more conducive to health than small ones. Work and amusement is better than all work. Excessively hard labor kills. All these are facts, and no one is culpable for their truth, neither is the State.

Mortality diminishes as the comforts and regularities of civilization increase. In 1685, Macaulay says, that 1 out of every 20 of the inhabitants of the United Kingdom, died. This is 5 per cent., or barbaric mortality.

In France, the mortality between 1770 and 1790 was 1 in 30 of the whole population, when as now, in the same kingdom, it is about one in 43.

In 1856, the mortality in London, with a population of 2,362,000, was 22 in 1000, which showed the mortality of London to be less than that of any other city on the globe, the statistics of which were known. At this period civilization and the science of medicine were at a higher degree of excellence in London than at any previous period in its history.

But let us cross the Atlantic and examine some of our own cities. Look at the mournful picture of mortality in New York. In 1810, the mor-

tality in that city was 1 in 46, (the same as London in 1856;) in 1815, 1 in 44; in 1820, 1 in 37; in 1825, 1 in 34; in 1855, 1 in 27 of the whole population died, and the ratio of mortality has not diminished in New York during the last four years. In Baltimore the mortality is nearly stationary, and has been for several decades, ranging from 1 in 39 to 1 in 43. In Philadelphia, the great centre of medical learning in the Union, the mortality is about 1 in 38, vastly less than New York, but much greater than the city of London, whose very soil must consist of the dust of dead generations.

It will be perceived at a glance that a prolific cause of the astonishing mortality of New York is not due to its natural insalubrity, but to its chaotic emigrating population, and the almost unbridled license of crime, reminding the scholar, of Rome, about the period of murder of the second Gracchus.

But we come now to the text, of which this is the commentary. The following is the bill of mortality of San Francisco for the year 1859, as furnished us by the city sexton :—

*January.*—Under 5 years, 34; between 5 and 10, 5; between 10 and 20, 1; between 20 and 40, 60; between 40 and 60, 10; upwards of 60, 2; still-born, 7—total, 119.

*February.*—Under 5 years, 38; between 5 and 10, 2; 10 and 20, 2; between 20 and 40, 38; between 40 and 60, 17; upwards of 60, 1; still-born, 2—total, 101.

*March.*—Under 5 years, 35; between 5 and 10, 2; between 10 and 20, 4; between 20 and 40, 48; between 40 and 60, 12; still-born, 4—total, 105.

*April.*—Under 5 years, 28; between 5 and 10, 3; between 10 and 20, 7; between 20 and 40, 47; between 40 and 60, 16; upwards of 60, 2; still-born, 2—total 106.

*May.*—Under 5 years, 33; between 5 and 10, 3; between 10 and 20, 5; between 20 and 40, 42; between 40 and 60, 25; upwards of 60, 4; still-born, 14—total 115.

*June.*—Under 5 years, 54; between 5 and 10, 4; between 10 and 20, 3; between 20 and 40, 40; between 40 and 60, 17; upwards of 60, 4; still-born, 2—total, 124.

*July.*—Under 5 years, 53; between 5 and 10, 2; between 10 and 20, 3; between 20 and 40, 42; between 40 and 60, 20; upwards of 60, 3; still-born, 6—total, 129.

*August.*—Under 5 years, 57; between 5 and 10, 2; between 10 and 20, 3; between 20 and 40, 43; between 40 and 60, 26; upwards of 60, 1; still-born, 3—total, 137.

*September.*—Under 5 years, 52; between 5 and 10, 13; between 10 and 20, 2; between 20 and 40, 37; between 40 and 60, 17; upwards of 60, 3; still-born, 4—total, 128.

*October.*—Under 5 years, 81; between 5 and 10, 13; between 10 and 20, 5; between 20 and 40, 51; between 40 and 60, 22; upwards of 60, 2; still-born, 5—total, 180.

*November.*—Under 5 years, 79; between 5 and 10, 20; between 10 and 20, 4; between 20 and 40, 43; between 40 and 60, 18; upwards of 60, 2; still-born, 3—total, 171.

*December.*—Under 5 years, 83; between 5 and 10, 13; between 10 and 20, 9; between 20 and 40, 47; between 40 and 60, 18; upwards of 60, 2; still-born, 2—total, 174.

#### RECAPITULATION.

Total number of deaths under 5 years of age, 629; between the ages of 5 and 10 years, 84; between 10 and 20 years, 49; between 20 and 40 years, 439; between 40 and 60 years, 218; upwards of 60 years, 27; still-born, 43—grand total, 1589.

There is no legal necessity that a record of the cause of death should be kept, and hence it has not been done with any uniformity; consequently, all reference to disease is omitted in the above statement. We think it falls at least 200 short of the actual mortality. In this list there is no account made of abortions and miscarriages, which would certainly reach nearly 200 annually in this city, unless it is much more fortunate than other large towns. But placing the mortality at 1600, and our population at 80,000, the mortality is 1 in 50, which is less than London now or New York in 1810.

San Francisco is, beyond doubt, the most healthy seaboard town in the world.

When the thousand unusual causes of disease and death to which our population is exposed are considered, one is astonished at this small mortality.

The number of suicides in this city was large during last year. We can think of not a few deaths by violence and in quarrels. Then we have constant immigration from every portion of the globe; the habits of our people are unsettled, and their minds are in a constant fever of excitement and uneasiness. Such is the fickleness of fortune here, or rather of men in seeking her favors, that social ties and moral obligations are ignored in her pursuit.

Our streets are full of filth, and our alleys and by-ways and cellars and garrets abound in decomposing animal and vegetable debris.

We doubt if London or Paris can furnish single dens worse ventilated and more crammed with human beings than this young "city of the sea." But in defiance of all these causes, ours is the most salubrious city in the world.

The breezes from our mountains and plains, and the howling winds from the eternal ocean-plain, whose equal billows ever roll in grand harmony at our feet, are heaven's messenger-angels of health and long life.

But all this bounty of Providence never reaches the innocents; nine-twentieths of the population of our city of the dead are these rose-buds of our race. The breeze of the mountain, the howl of the ocean, never reaches them; but their graves are watered with tears, and the paths that lead to their resting places are trodden with countless steps.

The disease called scarlatina has committed great ravages. Hundreds of families are in mourning to-day for some child lost by this malady.

The profession must confess that till some more positive knowledge is acquired of its etiology and pathology, they can scarcely hope any certainly efficacious and uniform system of treatment applicable to this affection. We positively know one fact concerning it, that it cannot be safely and rationally treated without diuretics. We know the rest is stimulant, tonic, nutritious, and topical; but how much, when, how administered under given circumstances, and finally, why do all remedies fail in at least ten per cent. of the cases?

It will be observed that during the last seven months of the year, the deaths of children under five years averaged 39 per month more than during the preceding five months; nearly or quite all this increase was due to scarlatina; that is, 273 patients died of scarlatina in seven months.

Now we have taken some pains to enquire of physicians how many scarlatina patients they have had during the last year, and we think that fifteen each for about a hundred persons, regular and irregular physicians who are practicing medicine in this city, is the highest average number that can be allowed, from the statements we have collected. There have been then 1500 cases of scarlatina, of which 1227 have recovered, and 273 died, or one in 4½. This is certainly a large ratio of mortality, but we believe it is not far wrong.

We constantly meet physicians who tell us they have not lost a case. We enquire their treatment; it can be found in "Watson's Practice." In fact, we can hardly find a physician who *has* lost cases. If they speak truly, (and why not?) hundreds of cases must have gone without professional aid.

But it is true, beyond question, that at least one in five of the scarlatina cases in this city during the last year and the current portion of the present, are dead.

We have nothing new to say concerning the treatment of the malady.

We believe in diuretics, and fresh warmed air. We abhor cathartics and warm baths, and change of clothing, and suffocation with bed-clothes and hot bottles. We believe in the phosphate of potash and perchloride of iron, and acetic acid, and carb. am, and muriatic acid, and acetate of potash, and spts. nit. æth., and tr. colch., and the hypophosphites; one to be preferred to the other as the occasion requires.

Lastly, we believe in nutrients and alcoholic stimulants.

W.

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THE Editorial article in Cooper's *San Francisco Medical Press*, headed "A Medical Man Indicted for Perjury," is, as it reads, wantonly and maliciously false. The editor of that Journal is a low bred, disgusting, ignorant knave.

W.

**MORTALITY.**—The total number of deaths in the city of San Francisco during the month of January of this year, (per statement of two undertaking houses, Massey & Yung, and W. Gray,) was 163.

Of these, 85 were under 7 years; from 7 to 20, 5; from 20 to 30, 17; from 30 to 40, 37; from 40 to 50, 13; over 50, 5.

It will be perceived that over one half the mortality is among children of irresponsible age.

From 7 to 20, and from 50 upwards, our population is comparatively immortal. These are the periods of life in which the moral faculties have most control over the actions.

From 20 to 30, seeds of death are sown, and some matured; but from 30 to 40, the harvest of youthful irregularity and mature dissipation, is reaped. The very decade in which man might be most like a God is the one in which death most interferes with his good or evil purposes, W.

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( A B S T R A C T S . )

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**HEMOSTATIC PROPERTY OF THE SULPHATE OF THE PEROXIDE OF IRON OF M. MONSEL.**—The following note on this agent, which has become thoroughly domesticated in California, will be read with interest. The idea that the employment of Monsel's Salt on man may be attended with *inconveniences*, will appear extremely *naïve* to California physicians. Why, in this State and Oregon, at least five pounds a month are used on man, (of course,) not a grain on goats or rabbits. It is manufactured too in this city, according to Monsel's formula, and Monsel is considered by all of us as a benefactor, and one well deserving of the profession and the people. We consider it eminently harmless, whether applied to fresh wounds, or ulcers of any character. Perchloride of iron is as inferior to Monsel's Salt as a hemostatic, as alum is to perchloride of iron. But here is the note from the *Gazette Hebdomadaire*, 11th Nov., 1859.

"The hemostatic action of this sulphate of iron was pointed out by M. Monsel as long ago as 1850. He prepares a neutral solution of it, marking 45 deg., extremely astringent, but not caustic.

"From comparative experiments made with it, at Val-de-Grace, under instructions from the Board of Health, by M. Poggiali, upon goats and rabbits placed in identical conditions, it appeared that the sulphate of the peroxide of iron is a hemostatic as powerful as perchloride of iron, and that in both series of cases, a very prompt cure was obtained, although the wounds were very grave, the incision having divided large vessels; but, as M. Poggiali remarks, *we cannot conclude from facts observed, that on man the application of this salt of iron would not be attended with any risk (inconvenient.)*" [The italics are ours.—EDS. P. M. J.]

The solution of sulphate of peroxide of iron gives with albuminous liquids, such as blood, white of eggs, etc., a completely insoluble, resistant and voluminous clot. It has also been proved that it has arrested hemorrhage in a great number of cases. W.

**BOTANY AS AN ALLY OF MEDICINE:** a Lecture delivered to the Medical Society of the University of Nashville, by George S. Blackie, M.D., A.M., F.R.S.E., Member of the Medico-Chirurgical Society of Edinburgh, etc., etc., etc., Professor of Botany and Natural History in the University of Nashville, and Assistant Editor of the "Nashville Journal of Medicine and Surgery."—A very interesting and instructing lecture.

**NINTH ANNUAL MEETING OF THE ILLINOIS STATE MEDICAL SOCIETY.**—The prize essay on opium, by A. L. Hudson, M.D. etc., is a good essay, and written in a pleasing style, and entirely posts one up on opium. But we cannot permit the essayist to escape Scot-free, he must pay toll: on page 138 he says, "A convenient and safe rule for the administration of opium to infants under a year old, is to give a drop of officinal laudanum for every month in the child's age."

Pardon us, friend, but this is all wrong; it is ten times too much. M. Trousseau says he has known a single drop to plunge a child in a state of stupefaction for 48 hours. If this "rule" be followed, "brain fevers" will slaughter the innocents, as usual.

**RECEIVED, Fifth Registration Report, South Carolina, 1858,** by Robert W. Gibbes, Jr., M. D., Registrar.—A valuable statistical work, with apropos and concise comments by the author.

**THE PHYSICIAN.**—In a valedictory delivered by Dr. Newman, of Buffalo, lately, occur these eloquent periods, which touch the heart of the true physician:—

"Shall I speak of the heroism of the profession? The history of epidemics attests it better than I am able. Witness the pestilential emigrant-ship; the lazar-houses of fever; the dens of cholera; the places where men's faces blanch as they enter, but where the physician with a higher and more noble courage than the soldier, faces death, confronts a hidden enemy whose aim is as deadly as the rifle. But alas! the dead physician no one remembers. The victim at the cannon's mouth is the subject of a nation's mourning. The physician dies, and is gathered to his fathers. Who, outside of the profession know aught of the forty martyrs of Norfolk's yellow-fever epidemic?"

"But why detail these things at the expense of your time? Ours is a profession of labor—unappreciated too often—abused more frequently than appreciated.

"Sombre thoughts intrude themselves, at times, upon a review of the past. The quack is too often preferred to the physician. Will it ever be otherwise?"

"TRACHEOTOMY is powerful to save life when the larynx only is involved, but is generally absolutely useless when the bronchi are implicated."—*Barclay*.

*A fortiori*, if there is pneumonia also present, tracheotomy would be worse than useless.

What then can be done to relieve or postpone suffocation occurring suddenly in a patient convalescing from scarlatina anginosa, or typhoid fever, attended with pneumonia, as both these diseases almost always are?

We saw, a few days since, a beautiful little girl suddenly attacked with blowing respiration which gradually increased, terminating in death in sixteen hours. She was convalescing from scarlatina anginosa. The day she was attacked (fourteenth of disease,) her digestion was good, verified by appearance of feces; urine sufficiently copious, and free from albumen, tested by heat; contained chlorides, tested by arg. nit. But the breathing was tubular, and there was fine and coarse crepitation in parts of the lung, no pure vesicular murmur—auscultation by the stethoscope,—chest too sensitive to permit percussion. Twelve hours after blowing respiration was noticed, there was no crepitation, coarse or fine, on front of chest—only portion auscultated—but loud tubular breathing; slight cynaosis in places, was now observed.

Tracheotomy, of course, being out of the question, and nauseants useless, verified by the induction of vomiting, with increase instead of diminution of the dyspnœa, we were compelled to stand with our arms folded and witness the terrible struggle of slow suffocation, without any power to even mitigate the agony, except by means immediately destructive of life. W.

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ON THE RETURN OF SENSIBILITY TO THE NERVES AFTER THEIR DIVISION.—Dr. Lotzbeck, of Tubingen, (*Gaz. Heb.*, 11th Nov., 1859,) has made careful researches on this question, in five cases of division of the nerves, of which three related to inferior maxillary, and two to the infra orbital. Four times he excised a more or less considerable portion of the nerve, once merely divided it.

In every case the operation was followed throughout the sphere of distribution of the divided nerve, with diminution or complete abolition of tactile sensibility, and the perception of temperatures; this modification of sensibility was complete, either immediately after the operation, or in the course of 24 or 48 hours, or only after the elapse of some [?] days. The diminution of perception of temperatures was sometimes proportioned to the abolition of tactile sensibility, and proceeded, *pari passu*, with it; at others it still remained, though the tactile sensibility had materially decreased, and disappeared more or less completely only at a later period.

The diminution of tactile sensibility is accompanied with the following peculiarities: the patient recognizes more slowly and with less precision the point touched; furthermore, to produce a double impression, it is requisite that the two points of a compass, in contact with the skin, be separated more than in the normal state, and the distance apart of these two points must be progressively increased.



In all the observed cases, more or less marked return of sensibility has been perceived. This phenomenon has, moreover, presented great variations in different cases; it has been observed sometimes after a few days, again after a much longer period; the sensibility may be restored in the whole extent of the teguments in which it had disappeared, or merely in a few circumscribed portions; sometimes it returns to its normal force, and again it remains enfeebled.

The restoration of the perception of temperature proceeds generally, with only slight variations, *pari passu*, with restoration of tactile sensibility; but in one case the latter had almost returned to the normal state while the perception of temperature remained null.

W.

PULMONORY CONSUMPTION—A PRESCRIPTION OF DR. LOUIS. —The *Druggist* copies the following from *Championnière's Journal*:

To support strength, to subdue the cough and promote sleep, to diminish night-sweats, such are the three-fold indications which are met by the following prescription of Mr. Louis, in the case of confirmed phthisis:

1. Take, one hour before the principal meals, one pill of protoiodide of iron (Pilules de Blancard) After ten days increase the dose to two pills, and drink immediately afterwards a small tea-cupful of infusion of quassia, made with cold water, and not sweetened.

2. At night, or four hours after the last meal, take a pill of extract of opium of 1 6th to  $\frac{1}{4}$  grain.

3. If abundant perspiration be present, take at bed-time one or two pills of 2  $\frac{1}{2}$  gr. of white agaric.

4. The diet should be generous, but not stimulating.

ON SUPERFETATION AND SUPERFECUNDATION.—Dr. Kussmaul remarks that superfecundation occurred if several ovula of the same period of ovulation were fecundated, in consequence of repeated connection. A superfetation would be established by the conception of an ovulum derived from a later period of ovulation, than that which was first fructified. But as it is not proven, at the present day, that ovulation continues after conception has taken place, therefore the possibility of a superfetation even in utero duplici, is not probable. Nor are we in possession of one reliable observation of superfetation in extra-uterine pregnancy. All the cases may be explained by a conception of two ovula of the same period of ovulation, or by a renewed ovulation after the death of the extra-uterine fetus, and returned ovulation.

The strongest proof of superfetation are those cases where full-grown twins have been born at a considerable distance of time; and of greatest importance are the observations reported by Eisenmann and Desgranges.—*Verh. des Naturhist. med. Ver. Zu Heidelberg* vi. p. 178.—*Schmidt's Jahrb.* 103. 8.

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Communications.

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Differential Diagnosis in Pyuria.

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BY DR. JOHN B. TRASK.

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I HAVE been induced to offer the following remarks on pyuria in consequence of some deficiencies that appear in practice touching the important diagnostic features of this symptom connected with structural lesion of portions of the genito-urinary organs. It must be admitted that our literature upon this subject is extremely limited, and any addition that can be made to it of a clinical character, though imperfect, may serve at least for future reference, if not for present use. Whatever of fact has been elicited from our clinical observations which follow, it can have only that value to which it is entitled, and it cannot dim the ray which any other light has shed, and, if the statements are weighed in the balance and found wanting, there is but little danger that the errors they contain will find their resting-place like others which have preceded them.

There are but few diseased conditions of the urinary organs of a chronic character which prove the source of more perplexity in treatment and are

really more obscure as to their cause and seat of trouble, than those productive of deposits having a purulent aspect and reaction. The variety of conditions giving origin to such deposits seems to call for fuller detail whereby we can form a more approximate diagnosis, and by which we may more readily discriminate the purulent deposit having its origin in structural lesion of a serious nature and indicative of organic disease, and the simulating deposit having its origin from an inflamed or simply an irritated condition of the mucus tissues of these parts, or from the sequela of a previously inflamed condition. To rely upon simple inspection of such a deposit for the purpose of forming a correct diagnosis of the morbid process actually present, is an impossibility, and a treatment founded on such an examination alone, can claim no higher title than empiricism. It is to be regretted that our means of discrimination of the character of these deposits in the urine do not partake of greater simplicity; but we have no choice in this respect, but must take nature as we find it, and, when the unaided eye, though practical, is found inadequate from the general appearance of the bulk, to define the ultimate corpuscle and its associated structures, other measures must be used which are more effective and demonstrative. The eye is incapable of estimating the corpuscular forms in these deposits, and it appears very irrational to attempt the recognition of a body so much less in size than this organ alone can resolve, and even though in bulk, its homogeneous appearance is so like many substances having no analogy to pus, that an error in judgment would most easily be made. We, therefore, cannot rely on the unaided eye alone, nor on simple inspection with the microscope alone, nor on chemical reaction alone; but micro-mechanical and micro-chemical agencies are commonly adequate, though not always, to develop the basis on which an opinion approximately correct may be formed as to the true character of the accidents we are called upon to treat.

The latter aids, though powerful and ultimate so far as they go, yet do not in all cases demonstrate all the material present and necessary to determine; carefully conducted chemical reactions alone are capable of eliminating the remaining occult quantities and substances. Without all these means at our command, we cannot safely enter upon the determination of the indications of what may appear as purulent urine, and much less enter upon a rational treatment for the removal of the difficulty; any treatment founded on a less careful examination than that just detailed, we repeat it, is not only culpable, but wholly inexcusable empiricism.

In the case before us it is required that a diagnosis of purulent urine be given, and the character of urine containing pus. If our recent authorities be consulted and taken as our guide, we state unequivocally, *it cannot be given in an understanding manner*, and if the requisition be answered, it must be by something more than plain contradiction of specific characteristics. As the definition of purulent urine now stands, there is no diagnosis. In proof of which we cite *verbatim* the two latest authorities on this point.

“(328.) *The characters of urine containing pus.*—Generally acid, or

neutral unless long kept, and slow to putrefactive change." "More or less albuminous."—*Golding Bird, M. D.* Page 361.

"Urine containing pus is mostly *alkaline* and always albuminous."—*Thudichum. Pathology of the Urine.* Page 257.

We give these quotations to show that a wide discrepancy is apparent as to what should constitute the specific characteristics, physical and chemical, of purulent urine, and both absolutely contradictory are taught as the specific basis on which the fact of pyuria is to be estimated. This places us in the position to infer that two exactly opposite conditions of the same fluid means precisely the same thing, which, to say the least, appears paradoxical.

In a symptom of such grave moment as purulent urine is at times, so loose a manner of expression and paucity of detail regarding its peculiarities of occurrence and characteristics, by men who essay to become directors of medical scientific practice, should be looked upon as an inexcusable pretension to practical observation, or a most culpable carelessness in failing to lay down all the facts which should be known to them concerning the important and minor values which the symptom of a purulent urine may indicate.

When standard authorities differ so widely respecting the symptoms, it is not strange that we should meet with statements equally variant with regard to the results of treatment and diagnosis in these morbid conditions, and we constantly find that the different measures proposed by one or another as a specific treatment, again denounced as worthless in some other portion of the country in a very short time. It is not difficult to perceive the cause of such discrepant results and statements, and we may thank such authority as quoted for the unpleasant dilemma in which confiding medical men are not unfrequently placed.

We are not certain that the intricate labyrinth in which this matter is involved will be plotted more plainly or made more lucid by us than by those who have preceded us; but whatever may be here indicted shall have one merit at least, viz.: the facts shall be such as we have seen, and the theories when advanced, such as harmonize with the present state of physiology and pathology.

Before entering upon the examination of the characteristics peculiar to pyuria, we will solicit attention to the pathological indications of this symptom as given by the authorities above cited. Dr. Bird upon this subject uses the following language: "Whenever pus occurs in urine it generally indicates the existence of suppurative inflammation in some part of the urinary apparatus." And in this opinion Dr. Thudichum also agrees. As to treatment, little is suggested further than do the best in your power. As pyuria now stands from modern authority, we must believe that a suppurative process is necessary to its occurrence, which is a doctrine at once opposed to the present advanced state of scientific knowledge. We, therefore, take the position that this symptom as now taught has no other tendency than to mislead and confuse; and that the characters of urine holding this deposit and its pathological indications are alike exceptionable and faulty. How far

this position is tenable remains to be seen, and we respectfully submit the facts to the unbiased judgment of the medical reader.

From a series of examinations conducted during the last two years on the morbid deposits found in urine, which number of cases in the aggregate amounts to one hundred and eighty-four, it has been found that nearly thirteen per cent. have presented the symptom under consideration, as received and understood at the present time. The percentum of cases in which pus deposits were observed are sufficient to form somewhat of an approximate opinion as to its frequency and the class of accidents inducing it. Limited as these cases are in number, (still they are large to the aggregate,) they nevertheless have their clinical value, for they have exhibited the unfrequency of that form of structural lesion of serious import, and those also where the symptom was present but not indicative of dangerous results in the termination of the cause exciting it. More than one mouthy reputation has been acquired here in consequence of rapidly curing these last forms of Bright's Disease!

From careful observation we shall find a very much larger proportion of diseased conditions of the urinary organs in which true purulent deposits occur in the urine (as pyuria is now taught,) than where a destructive suppurative process is present in the tissues of those organs; therefore a destructive lesion in all cases, or even *generally*, is an inadmissible term as at present applied, and as we understand it in these cases to imply. Hence, it would seem necessary that we should give wider scope to the signification of the symptom so as to include all the morbid conditions from which it arises, or change the nomenclature in such manner as to define specifically the condition symptomatic of danger alone. This demand is not exorbitant, for the rules of science prescribe that a title, whether generic or specific, shall be such that the object or quality it represents shall isolate it from every other body, either foreign or allied, so that it shall be easily recognizable by its name. This necessity becomes the more apparent when we consider the fact that a treatment based on symptoms has for its object the restoration of the normal state, and it is now submitted that where several (at least four) abnormal conditions are productive of an apparently identical symptom, no rational measures of relief can be adopted for it, where the symptom alone is the guide. We further submit, that where pyuria is symptomatic of serious renal lesion, that the indiscriminate methods of treatment recommended and pursued are of a character to increase rather than mitigate the distress. When we consider the structure and functions peculiar to mucus tissues, and the products of their secretions in the normal and under abnormal conditions also, it is not difficult for us to perceive that a corresponding abnormal state of this membrane of the bladder or of other parts of the genito-urinary organs, is susceptible of presenting similar abnormal products of secretion, as when the analagous tissues of the air-passages or the œsophagus are involved in similar diseased conditions; and this fact being granted, we can easily detect a true purulent deposit in the urine under these circumstances, when functional disturbance alone is present. The functional disease has received

the title of a catarrh, but coupled with distinguishable pus-corpuscles in quantity, and an albuminous fluid, who is prepared to say that such a case is, or is not, one where destructive suppuration is going on, so far as our teachers in urinary pathology have laid down their rules for diagnosis?

Although the ground is valid for execption, and the detail faulty from which we are directed from certain conditions of urine to pronounce unequivocally as to the cause of its purulent character, it is not intended to raise any new theory to account for the different forms of purulent urine met with. We can do much better, for by the application of known facts, we are furnished with facilities that will serve us, in a measure, to disintegrate and isolate the heterogeneity of condition and elements in which the question is now involved. It needs but a moment's reflection to perceive how radical is the error of the present doctrine on this subject; if it was true, we should in all cases find remnants of the tubuli uriniferi, when we meet with pus and albumen in urine (and when from other symptoms we know its origin to be the renal organs,) yet we find that their absence is often noticeable. What is necessary for us to understand is this fact, that purulent urine may and does appear frequently without a destructive suppurative process being present, and that as a consequence there is not that serious import in its occurrence in all cases that we are taught by authority of seeming law to believe. It is not to be understood that we believe or even intimate that pyuria is a symptom of no value, for painful experience teaches that it is pathognomic of lesion of structure, fatal in termination. But there are a greater proportion of instances in which no structural lesion (like suppuration) occurs, yet a deposit undistinguishable from pus by any method of investigation is found, and the urine gives the corroborative evidence— the presence of albumen.

What then are the symptoms which are to serve as the guide in estimating a structural lesion of a serious nature when pyuria is present; and what is a correct definition of that symptom? We should answer these interrogatories in accordance with the varied features which the symptom presents, and thus divest it of the restrictive sense at present attached to it; for as it now stands, its signification is but a part of an aggregate series of accidents, all of which present nearly identical features.

Excepting the discharge of abscesses through these organs from adjacent or distant parts of the body, we would give to pyuria the following definition:—

A symptom of local disease of the genito-urinary organs, unattended in a majority of cases, by lesion of structure, (a suppurative process.) In a small minority of cases it is a symptom of suppuration of portions of these organs, and then only becomes a matter of serious significance; it is now marked and may be recognized by certain morphological elements. The reactions of urine containing pus are acid, alkaline, or neutral, varying in intensity of degree, and therefore are valueless as diagnostic features alone. (The value of these conditions will be reverted to in another part of this paper.) When urine contains pus, albumen is a constant constituent.

This we consider to be an approximate definition of pyuria, and one that will comport with practical experiment in a general view; our object being simply to express in this manner the common conditions from which it may arise, and the dogmatism of the chemical reactions as laid down in our works as absolute conditions attendant upon its occurrence. The value of alkalinity, acidity, or neutrality, is matter for discussion as to its connection with the symptom, and is one of the paradoxes we propose in a brief manner to examine.

We shall present the forms of pyuria that are found, in the following manner:—*First*. That arising from renal suppuration. *Second*. That from cystic suppuration. *Third*. That arising from chronic inflammation in those organs. *Fourth*. That having its origin in vesical or renal irritation, but neither of the preceding conditions being present.

*Purulent Deposits from Renal Suppuration*.—Pus may occur in urine from this cause, and when this is the case the symptom should always be regarded as one indicative of danger, and the persistence of the cause as destructive of life. When this is the case there are physical and chemical conditions present that become of value in directing the measures to be adopted in diagnosis and treatment. The measures are both chemical and optical, and will alone enable us to determine the exact condition present. With those means at command there is little difficulty of arriving at a correct conclusion; without them a conclusion is scarcely possible.

In renal suppuration we always find portions of the tubuli uriniferi present in greater or less quantities, (these are distinguishable from the fibrinous casts of those tubes,) and when the suppuration is much advanced, free or sacculated fat globules are met with. Nasse has classified these elements most distinctly, and we give his arrangement. The first consists of the epithelial investment of Bellini's tubes, presenting a true tubular form, and the cells disposed in a honeycomb arrangement. Found in the inflammatory stages. The second are the casts of these tubes, formed within their walls; they contain blood corpuscles and those of pus. They are met with in the acute and early suppurative period. The third are the hyaline tubes, which are the *membrana propria* of these canals. They are met with in the chronic stages, and when fatty degeneration has supervened. In this plain and simple manner, Nasse has thus furnished us with the important pathological features incident to renal suppuration, and which are not easily mistaken.

The urine in this case contains albumen, and pus of course, and in all cases which have come under my observation the fluid was *invariably alkaline*, and the pus itself, when immediately separated and washed, gave the *same* reaction to litmus.

In the early stages of this affection of the renal organs, an important cause of error in diagnosis deserves mention; it is the *apparent absence* of albumen when the purulent deposit is slight, which if we fail to detect, is apt to lead on to irreparable mischief; it is at this particular time that remedial

measures are capable of averting a painful disaster which must follow a continuance of the suppurative process here.

The cause of error lies in our failure to detect this corroborative material by the common test of heat, or acids alone, when both in fact are absolutely necessary, not only to develop its presence, but also to exhibit its true character.

It is not uncommon to find that when albumen is present in the urine in notable amount, that it is not developed in the coagulated state even after a continued boiling, and when we consider for a moment its individual alkaline relations, and then its diffusion in a weak alkaline fluid, it is very irrational to expect such a result. Therefore, the *general* statement of its coagulability by this means partakes of that peculiar inexactness incident to hasty observation and more hasty compilers, and hence has arisen many of those serious errors of diagnosis in this disease. The *general* direction again to add an excess of nitric acid where any doubt exists from the reaction of heat, has also contributed its share, and in no small degree, to confirm an error arising from the effects of heat; this has been the case more particularly where the greatest accuracy has been required, viz.: where the disease is incipient, and where the quantity of pus and albumen is small.

Thus the peculiar simplicity of detail (so much admired,) on questions of vital value to the sufferer, and in diagnosis to the medical attendant, alike not unfrequently prove destructive of health and life to the one and the reputation and confidence of the other. We had better be exact in what we state even if abstruseness be the result, and we should even incur the risk of seeming pedantic, rather than indulge in a descending simplicity, where the want of detail in pointing out important features is very liable to be followed by very unsatisfactory terminations.

The fact that albumen always exists in animal fluids in a combined form, is sufficient to exhibit the necessity of being able to detect it under more conditions than one or two, and to separate that form of deposit which is *precipitated* by water, acid or alkaline reagents, or salts, or that which is soluble in acid and saline solutions, and that which undergoes *coagulation* from heat or other causes. For on these forms of development much depends. Therefore, in the examination for this substance, the chemical state of the urine should first of all be accurately determined, in order that the subsequent experiments may be properly adjusted to secure the negative or positive results as to its presence or absence.

There are widely different appearances in the albumen of pyuria under different reactions, arising from its integral composition and union in the urine; at times, though rare, we see it assume almost the gelatinous form of nearly pure albumen from heat alone, (one such case we saw in August, 1858, in a patient with chronic Bright's Disease,) forming nearly a true homogeneous mass. But the most common feature which it presents is that of flakes, when heat alone is applied, or when chemical reagents have been conjoined. When the albumen is deposited from its solution in the urine in this



shredlike form by these means, the alkaline union formerly existing (as albuminate of soda) has been destroyed, and the deposit is seen in the precipitated condition. The membranous pellicle so frequently observed on the surface of alkaline urine, which contains pus, and which has been subjected to heat for the purpose of determining the presence of the albuminous constituent, consists of the soda salt; and though this heat has failed to develop the presence of albumen by coagulation or precipitation, and the evidence is therefore negative as to its presence, yet it is still there, but requires the use of *dilute* acids, or simply the addition of a large bulk of water, to demonstrate the fact of its existence.

When we come to speak of deposits simulating pus in urine, we shall allude to this point again.

We now reach a point of our subject wherein the diagnostic features are even more complicated than in the preceding case, but the results of an erroneous diagnosis have not that serious importance.

*Vesical Suppuration.*—In pyuria resulting from a suppurating surface of the mucus or submucus coats of the bladder, we find the urine commonly giving place to analagous conditions, as when the disease is located in the renal organs; and when the deposit is examined in bulk, as in a vessel, the deposits from either are undistinguishable. They simulate also in the albuminous element—the constant constituent of these accidents in both diseases.

When the tissues of the organ are thus affected, we often meet with appearances that are apt to mislead judgment; this is the occurrence of patches and isolated plates of Bellini's epithelium, which are to be distinguished by the microscope alone. On careful examination, it will be found that in a case of this character a sympathetic action is present in the tubes, from which this frequent excess of these scales has been derived. Hence, a close scrutiny of the deposit should be instituted, that this source of error in diagnosis may be obviated. The absence of the tube-casts, either fibrinous, epithelial or hyaline, with their usual accompaniments, will correct any such error as might arise from that source, when we remember that these latter are thrown off from the renal organs under certain conditions only, and which are noticed on a preceding page.

When the diseased condition giving rise to a purulent urine is confined to the coats of the bladder, we shall commonly find that the pus corpuscles when recently thrown off, are larger and less granular than those arising from renal suppuration; this is most readily observed, if, after the urine has been voided, the bladder is washed with clean water after a short period; the highly granular corpuscles and those less granulated are observable in the same fluid and deposit, when voided *per naturam*, but the latter we have always found bear a less proportion in number than when obtained by washing out the vesical sac.

The chemical condition of the urine, like that from renal disease, is alkaline, but commonly not so strongly marked as in the latter, and at times it exhibits a neutral condition. In no case have we met with an acid reaction

with this accident present, if the urine was examined when freshly voided; this is the time that an acid reaction should be present, if that reaction is possessed of the seeming value which is attached to it in some quarters—where it is stated to be almost an absolute condition.

The albuminous constituent is present, and may at times be coagulated by heat alone, particularly if the urine has stood for some hours after it has been voided; but when the urine is treated immediately after it has left the body, it comports itself in all particulars like that described under the renal form of disease, so far as the development of the albumen is involved.

*Pseudo Pus, from Vesical and Renal Inflammation.*—In this we have the third form of accident giving rise to apparent pyuria. It is this form of disease which imparts to the urine a milky turbidity, (distinct from chylous urine,) which is rather peculiar in some of its features, the particles of which do not subside with the same readiness as pus. Those who have been in the habit of examining deposits of this character can ordinarily distinguish it from pus, but it is not unfrequent that it is entirely undistinguishable from the latter when viewed after deposition, or while disseminated in the urine. One of its most striking features is the granular form it commonly assumes, partaking more of this characteristic than the purulent deposit from an ulcerated surface, it has not usually the yellow tint incident to pus, and seems more easily miscible in the fluid. Another of its phases is the granular condition it maintains in the urine after a long period; it does not clot like pus after subsidence, or on the development of a weak alkaline or neutral condition of the urine. On the stage of the microscope these corpuscles at times cannot be distinguished from those of true pus, but when the necessary precautions are taken and this examination is then instituted, they will be found much larger, are less granulated, and when viewed edgewise they will commonly present a more persistent discoidal form; they are thus separable from the corpuscle of pus, on account of this general absence of sphericity.

The reaction of the urine in this form of disease we have always found to be acid, often very remarkably so, and the same reaction is given from the well rinsed deposit when triturated in a mortar with litmus. This latter effect is probably the result of the acid urine within the walls of these corpuscles from endosmosis.

The urine in these cases is commonly rich in albumen; it is equally plentiful at times as when extensive suppuration is going on in these organs; it is that condition of urine, so far as *general* appearance and the reaction for albumen is concerned, which has been repeatedly mistaken as pyuria symptomatic of the ulcerative process. We shall reserve the discussion of the effects of reagents on this form of deposit for another part of this paper.

As to the character of this deposit, it appears to us that there can be but one opinion. We regard it as the epithelial investment of the mucus membranes of those parts, thrown off in consequence of the presence of an inflammatory condition, which is ordinarily of a chronic character, and although albumen is present, it must not be regarded as diagnostic of the suppurative

process, but is attributable to other causes. In the sequel, we think this fact will be satisfactorily shown.

When the causes inducing this pseudo-purulent deposit is located in the renal organs, the deposit of the epithelium of the tubuli-uriniferi are more copious than ordinary, and there appears a stronger disposition of this investment of the tubes to appear in masses than when these parts are in a normal condition; their presence, however, is not to be received as evidence of local diseased action; their excessive *quantity*, *persistence* and *aggregation* only, have any diagnostic value in such a case.

Should the affection be confined to the bladder, it will be found that the deposit will be more copious, and although the epithelium of the tubuli be present, (as it always is in the normal condition,) still the tessellated scales of the bladder and their copious excretion can scarcely fail to point out the position of the difficulty giving rise to the symptom we witness.

*Pseudo Pus, from Catarrhal Irritation.*—In this form of disease it is far from unfrequent that we have a deposit in the urine closely simulating that of pus, and the excretion of the corpuscles taken in connection with the fact of the occurrence of albumen in notable quantities at the same time, has often led to the error of diagnosing a purulent urine as being present. We allude here to a hypersecretion from the mucus membrane of the vesical sac, or other parts of the genito-urinary organs, which, arising from irritation, at times gives rise to the symptom under consideration.

There are peculiarities in this deposit and its association in the urine that will separate it from either of the preceding forms which have been presented.

The reaction of the urine is always acid, and often in a marked degree; the deposit, which is white and somewhat granular, is very often mixed with a tenacious ropy mucus, having the appearance of pus under the reaction of a strong alkaline solution; it may be known from the latter by its less density, and also its disposition not to adhere to the vessel when inverted. The *white* and more or less granulated form of the deposit is mucus, in all probability divested of its alkalinity by the acids of the urine and its volume of water.

A very distinctive feature in this deposit is found in the fact that (although the urine is acid,) it gives an alkaline reaction; in this it simulates pus, but the alkaline urine of this latter is absent. As a general rule, it will be found that when the urine is turbid from a deposit of this character, it does not subside with the same readiness as in the preceding conditions noticed.

On the stage of the microscope the appearance of these corpuscles very often are not to be distinguished from those of a purulent nature, so far at least as form, and their granulated surfaces are concerned, but there is a difference in their sizes, and frequently in the nucleation which is observable under the action of reagents, and which is more marked if they have not been long exposed to the action of the urine. The mucus corpuscle is larger than that of pus, and when recent is uninucleate, while the corpuscle of pus always contains more than one, and often many nuclei.

Having now presented in a brief manner four of the forms giving rise to purulent appearances of the urine, and a portion of their diagnostic features as we have observed them, also the general features of pyuria as understood at the present time, the indications of which is the peculiar precipitate formed under the action of heat and other reagents—and which is insoluble in nitric or acetic acid—with the presence of albumen in the same fluid as its constant attendant, we will now attempt to examine the value of the present doctrines touching its presence or absence.

On a preceding page we remarked that in the present state of our scientific literature, we were left to infer that two precisely opposite states of the urine, in all particulars of deposit and reaction, meant precisely the same thing. A short analysis of this paradox seems necessary to reconcile the contradictory condition as it now stands. To do this it becomes necessary to understand not only the products of the suppurative process, but the peculiarities which those products take on when in conditions foreign to their natural union, as when exposed, or diffused in fluids having different chemical proportions and constituents from those in which they are found when the pus is secreted upon the surface or in an abnormal cavity. To follow out all the minutiae of our exact knowledge on this point is not the design in this paper, for it would entail a prolixity really unnecessary and tedious; we propose, therefore, at this time, to consider only the more important features connected with this complex subject which are the most immediately accessible to general observation in practice.

The characteristics of the fluid of pus, its intercellular fluid, must first be considered.

This constituent of pus, as is well known, comports itself perfectly with the serum of the blood, and from it is derived the albuminous material of the secretion, whether met with in abscess, on the surface, or when it has been deposited in hollow organs, as the bladder, and there mixed with the urinary excretion. Hence, the law is correctly set forth, "*that purulent urine always contains albumen*;" the pus corpuscle and its intercellular fluid and albumen are inseparable constituents.

The characteristics of a urine presumed to contain pus, that is, its chemical condition, here becomes a point of much importance in diagnosis, for on its acidity or alkalinity we must in a great measure depend for our guidance in the subsequent determinations to be made as to the presence or absence of albumen to corroborate the nature of the presumptive deposit.

As before remarked, we have found the urine markedly alkaline in every case where renal suppuration was going on, and in the same condition, or at times neutral when that process was confined to the coats of the vesical sac; but in no instance have we found it acid in either of those forms of disease. From the remarks made on previous pages regarding the reaction of urine in pyuria, it will be seen that extreme care becomes necessary in order to recognize albumen in the early stages of the disease giving origin to the symptom; this becomes rational when we consider the fact that an alkaline

constituent is secreted from the alkaline fluid of the blood ; this is always the fact where pus forms on all surfaces and in all cavities. When pus is found giving an acid reaction, it becomes the exception ; it is extremely rare. Old abscesses sometimes present this anomaly.

To appreciate the above rule of the necessary alkalinity of a purulent urine, we have but to remember that the albumen of the intercellular fluid of pus, (and the corpuscles themselves, so far as known,) are rich in free potash and soda, and further still, it is found that on the decomposition of a purulent urine, however slight, it contains free ammonia. The doctrine then, (as at present accepted,) that a purulent urine is characterized by *acidity*, is, to say the least of it, very improbable, inconsistent with its constitution and known facts.

Particular attention is directed to the fact of the presence of the albumen in pyuria, and with reason ; but we shall see further on that a distinction is not made in this symptom which should appear, for if the fact of its occurrence is covered by our present doctrines relating to this point, we should be led to infer that destructive laceration of tissue was the only cause of the presence of this important element of our diagnosis. In our opinion this is the shore on which medical judgment has too often stranded ; if the presence of albumen and other protein deposits in urine giving the appearance and reaction of the pus-corpuscle are to be regarded in all cases as the evidence of a true purulent secretion in this fluid, then we have no diagnostic feature of pyuria, and any law subject to such exception of its elements becomes destitute of force and value. In our consideration of those deposits which simulate pus in physical appearance and some of their reactions, and are attended by the albuminous element, the force of the above objection will be more apparent.

The deposits which simulate pus, (to which we have just alluded,) are found in those abnormal conditions constituting the third and fourth division, and on the preceding pages are denominated as pseudo-pus, etc., etc. For these we propose the term of pseudo-pyuria, and from our remarks on their peculiarities under their specific heads we might rest on the postulate, still it is perhaps proper that we should examine them briefly in some of their details.

As the microscope is at times inadequate to distinguish the two deposits to be spoken of from those of pus in urine, we are required to produce other evidence as to the nature of the material that may thus be presented, and to draw distinctive lines from all the circumstances that shall separate these deposits from the cytoïd secretion. Those who are acquainted with micro-chemical investigations well know the difficulties with which this demonstration is beset. The reaction of acetic acid cannot always be relied upon for this demonstration after a subdivision of the nuclei has occurred, hence, one of our best reagents fails us in this hour of need. This being the fact, the differential diagnosis must be sought for in the size, form and appearance of the corpuscle, with the chemical reaction of the urine and the chemical reaction

of the deposit; its associated protein fluid, the albumen in this urine, most unfortunately furnishes no distinctive features of discrimination in the case before us.

The chemical condition of the urine, coupled with these pseudo purulent deposits, as we have before remarked, is always acid. Here, then, is a marked feature contrasted with the urine containing pus. The relative size, form and appearance of the corpuscles have before been spoken of, and require no repetition. The well rinsed deposit gives the same reaction as the urine, which is not the fact with pus when placed in similar conditions, (that is, when pus globules are placed in an acid urine,) unless the maceration is long continued.

Lest a seeming inconsistency should appear in our remarks on the occurrence of albumen in acidulous urine, from the incompatibility of acids with that substance, it is proper here to state the well established facts of Panim and Denis, that fluid acid albumen is known to exist, which is soluble in alkalies, acids, and neutral salts; the presence of chloride of sodium in notable amounts in the urine, and the active agency of this haloid in preserving the solubility of albumen in quite acidulous menstrua, should not be lost to our view in connection with this subject, and must have its due weight when an acid and albuminous urine are under observation and experiment.

Having previously stated that 'his pseudo-purulent deposit and albumen commonly arises from an inflammatory condition of the mucus membrane of the organs involved, and is chronic in character, it becomes imperative in some measure to account for the albuminous constituent. When we consider the impediment to the flow of blood in organs or tissues under this abnormal condition, it will be found that no extraordinary hypothesis is necessary to account for the occurrence of the albuminoid element. Schmidt's admirable and philosophic researches have lifted the veil from this once obscure subject; according to his law, it is known that in proportion to the decrease of the velocity of the blood through the capillary vessels, there is always a more copious transudation of its albuminous constituent. Hence, in local diseased action of this character, the health otherwise being normal, we ought to expect a copious deposit of albumen, and in all such cases this is found to be the fact.

In this beautiful demonstration of Schmidt, we have the key to one of these abstruse and perplexing points: a law proving that laceration of tissue, or the *destructive suppurative* process of our authors, is entirely unnecessary to induce the secretion of albumen; as a consequence, we shall find that under this diseased condition of the genito-urinary organs, we can have a urine closely simulating that of pus in all characters, and the *destructive suppurative process absent*.

Under the effect of this law, we find an easy solution of those important points on which our differential diagnosis is founded, as to the presence or absence of a truly purulent urine in any case that may be brought before us; for the well attested experimental fact that the intercellular fluid of the blood

does escape by transudation from the capillary vessels under abnormal conditions, without laceration of their walls, is now unquestioned; and that it is from this fluid that the albuminoid element is derived, is equally certain. There is no exception to this law whether the albuminous constituent of diseased action be found in the parenchyma or cavity of any organ of the body.

Until this law is proved untenable, it must take precedence of all theory or hypothesis; and under its effect we find ample cause for all the symptoms we witness in our divisions of pyuria and its pseudo forms. Hence, our objections to the present notions of the general symptom of pyuria becomes valid, for if a law can have force, it proves the symptom defective not only in its morphological matters, but also according to scientific nomenclature it does not express any conditions which should enable us to form a correct diagnosis in cases as they present themselves in general practice.

There remains another (the fourth) condition of the urine the deposit of which is equally often mistaken for pus, not only from its general appearance, but also when it is subjected to the usual chemical reagents, its albuminous constituent is as readily developed, and not unfrequently more readily, than is the case when true pus is present. The deposit in a case of this character being both ropy and granular, and its reaction alkaline, while the fluid containing it is always acid, it will be observed that a complication more perplexing than in the preceding conditions, here takes place. So long as the presence of albumen is regarded as *necessitudo simplex et absoluta* to purulent urine, and at the same time accompanied with protein corpuscles, then the mucus and epithelial deposit in such a case becomes (according to our present rules of distinguishing deposits in urine,) a true pyuria.

A moment's reflection on the pathological products of the mucus membranes under simple catarrhal irritation, will convince us that a fallacy exists capable of inducing erroneous diagnosis in these cases. In proof of this it is only necessary to state, that all accurate observers agree in the fact that mucus when secreted in consequence of catarrhal irritation, invariably contains albumen, and also that in normal mucus is found the same constituent. Were not this fact established beyond a question previously, the late researches of Virchow would put the matter beyond dispute, and fix it upon a stable basis. From his extensive and carefully conducted experiments, Virchow has recently advanced the law in this matter as follows: "There is no mucus membrane which will not give rise to puriform elements under certain circumstances. But a certain difference is always observable. A mucus membrane is so much more in a condition to produce pus, *without ulceration*, the more perfectly it possesses pavement epithelium."

This late announcement of the justly celebrated pathologist, most fully corroborates the experiments and announcements of those who have preceded him regarding the abnormal secretions of these membranes, and if facts elicited by direct experiment can have any value, they prove that the dogmatism of the physical law that albumen accompanied with protein corpuscles, or a puriform deposit in urine, as being consequent on a *destructive*

*suppurative* process, is baseless as it is bold. Therefore, the introduction of this element as a positive diagnostic symptom of all cases of pyuria as now understood, places us in a condition whence pyuria proper cannot be separated from simulating conditions. As we have remarked in another place, it is inadmissible in science that a title should express more than one condition; the element in our diagnosis in these cases expresses several pathological conditions of the urine, each of which is widely variant as to cause, course and termination. If our present dogma is to be applied indiscriminately, as heretofore, and the presence of albumen (with deposits of the character we have set forth in the urine) is to be the proof test consequent of the destructive suppurative process being present, then we had better throw urinary pathology aside at once, for in these cases we should be guilty of much less malpractice without it; for to us it seems evident that its present tendency is to misdirect judgment, and that it thus founds the basis of an irrational, if not in the majority of cases a decidedly injurious system of treatment.

We will now dismiss this subject for the present, but at a future time we will examine many of the points herein noted, and very many that we have been obliged to omit from the prolixity they would have entailed at this time. Our object has been to present more the general outline involved in this subject, rather than to discuss it at length in any of its parts.

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### Medical Literature in California.

BY J. D. B. STILLMAN, M. D.

It appears to me to be the duty of some one to give expression to the thoughts of a large number of the medical profession in the State respecting much of our literature. I am aware that in speaking in behalf of the profession it becomes me to speak with careful circumspection, to make sure that no feeling of friendship on the one hand, or of jealousy or hostility on the other, should have any place in the heart or should indite a single word from the pen. On what I shall write I do not ask the profession or any member of it to endorse it or any part of it. I believe they will approve, though I alone am responsible. That there is a state of things in the moral constitution of medical society in San Francisco that requires severe surgical treatment, is suspected by outsiders, and which, for the honor of the profession, should be remedied by every means that a general consultation can devise. But the medical literature which issues from the press of that place goes forth as the expression of medical intelligence and courtesy of the *State*, and in behalf of those who are thus misrepresented I enter my protest. The dignity of medical science forbids the introduction to its journals of personal



vituperation and the gratification of private animosities. Neither is a medical journal the proper place for elementary instruction in the principles of medical science; its readers are supposed to be men who have at least learned the alphabet of their profession, and it is an insult to the intelligence of medical men in the State to serve up to them such rudimentary essays, and those but but poor compilations. I will take as an example some articles on Syphilis published last summer in the *Pacific Medical and Surgical Journal*. The author of these articles has not only subjected himself to the charge mentioned, but he seems to have written the first one with Vidal on his knee. For instance, says the writer, "To Salicet we are indebted for a description of a swelling in the groin resulting from ulcers in the prepuce, and Lanfranc mentions the same difficulty produced by ulcerations of the penis. 'Sœpe provenat apostheme in imprime propter ulcra virgæ propter quod est decensus humorum et illi loca.' This language cannot receive any other interpretation," etc.

Vidal says, "Lanfranc, who was a pupil of William (of Salicet,) speaks of abscesses in the groin that follow ulcers on the penis. 'Sœpe provenit aposthema in inguine propter ulcera virgæ propterea quod est decensus humorum ad illa loca.'" Again our writer says, "In 1495, when Naples was occupied by the French army under the command of Charles VIII., it spread with such alarming rapidity and produced such extensive ravages, that it received the name of the epidemic of the fifteenth century." See Vidal, same page, "It was particularly during the latter part of this century, (1495) and at Naples whilst it was occupied by the French army commanded by Charles VIII., that this scourge was most violent, and counted its greatest number of victims. The rapidity with which the disease spread, &c., gave it the character of an epidemic, on which account this period in the history of Syphilis has always been known under the name of the epidemic of the fifteenth century."

(Toland.) "Although Fernel deservedly occupies the front rank amongst the scientific writers upon the subject, he describes both the local and constitutional symptoms so faithfully and accurately, that little has been added during the last two centuries."

Vidal—"But Fernel will always maintain his place at the head of the truly scientific epoch of Syphilis, and this too with the greater justice, as subsequent ages have made but few additions to his teachings."

These quotations suffice to show the originality of the articles on Syphilis. I do not propose to discuss the soundness of the practical observations included, or the value of Monsel's salt in the treatment of chancre. The writer claims to have discovered its value in such cases by accident. That accidents do happen we have just seen. But he says "Before the efficacy of Monsel's salt was ascertained, in consequence of the recommendation of Ricord, the Potassio Tartrate of Iron was prescribed both internally and externally, but I must say with very unsatisfactory results. If it had deserved the confidence of the profession it would not have been consigned to oblivion in so short a

time. Even a soft chancre, when treated with the Potassio Tart. of Iron, I have seen become both indolent and indurated, and it is often necessary to resort to other constitutional and local treatment," etc. Poor Ricord! Perhaps Dr. Toland can speak for the profession by authority quite as well as I can, but for myself I protest against such injustice to the great Ricord, whom greater men delight to honor. He recommended Potassio Tart. of Iron in *phagedena*, and so far from its being "consigned to oblivion," Ricord has in his recently published *Lectures on Chancre*, used the following language: "It" (Potassio Tart. of Iron) "is assuredly the opponent of phagedenism. It combats it, almost always moderates it, and most generally arrests its progress. I have treated successfully the greater number of phagedenic chancres which have come under my observation by the simple application of a solution of Potassio Tart. of Iron, and the internal administration of the same."\* My experience in its use has not disappointed my expectations, though I never so far misconceived the intentions of Ricord as to use it in soft chancre. In the last number of the *San Francisco Medical Press*, the editor says "In phagedenic ulcer I have used the aqueous solution of Potas. Tart. Iron with the best effects." Men's motives are the last things of which we should judge. If a man of science, especially one that aims to so great liberality as that of medicine, has made a discovery, or is possessed of a fact or method which he thinks would be a benefit to his fellow laborers or the public, it is his duty to publish it to the profession, that the world at large may receive the benefit of it. On the other hand, if the object is to impress upon the ignorant an exaggerated idea of one's learning or skill, let him not presume to do it through channels sacred to higher purposes, but let it be done in medical almanacs and given away at the counter of those who sell soap and dye-stuff.

Sometimes indiscretions are committed when the writer meant well, and, supposing that a new thought had occurred to him, has published it to the profession. These essayists have always been indulged and passed without comment, but when they emanate from one who takes to himself the honored title of professor or teacher of medicine, empty as sounding brass though the title be, he must expect his innocent essays at medical composition to be shown up on their true merits. He who aspires to a crown must not expect to sleep on a bed of roses. The man whom I now arraign at the bar of the profession is the author of a small paper on *Malaria*, in the *San Francisco Medical Press*. I do not charge him with intentional plagiarism; the paper bears upon its face the stamp of innocence, notwithstanding the grandiloquent title with which the author's name is announced, "Professor of Materia Medica of the University of the Pacific." Listen, venerable ocean, and all lands laved by thy waters, from "Oonalaska's shore" to "Chiloe's dreary isle," and from Sitka to Tasmania, and a thousand islands. Wake, ye millions of Japan, your University has arisen! A galaxy of genius has dawned upon you, ye listless crowds of Tahiti, and grim anthropophagi of the Fee-jees. Ho!

\* *Lectures on Chancre*, by M. Ricord; translated by Maunder Loudon, 1859.

Valparaiso, and thou, City of Pizarro, where are thy wasted centuries? Attention! one-half-the-world, by kingdoms! Odin no longer speaks to us from the mythic halls of Valhalla, the mythic halls resound with the achievements of the heroes of the lancet. Without delay I will quote from the essay—

“I consider miasma to be a poison generated by the decomposition of vegetable matter as above stated, under certain conditions and peculiar circumstances, all of which are ever present in that region of country, and kept in constant operation.

“I also believe, that though this poison is ever present in that region of country, it is *not active during the day time*. I arrive at this conclusion from the fact, that since the completion of the railroad, *travelers* in their transit across the Isthmus avoid the night air, and are, in consequence, not subjected to the influence of the poison.

“It is my belief, also, that this miasma, or peculiar poison, rises from the earth in the day time like the exhalations of aqueous vapor, and exists in the atmosphere as vapor exists in an invisible condition, and so attenuated that it is comparatively harmless; and that during the night, when the atmosphere cools down to the dew point, this poison, like the vapor of water, becomes more concentrated, and consequently more virulent.

“These conclusions are but hypothetical, but they are deduced from a consideration of what I have experienced, and I offer them merely as the result of my observations; and though not presented in a scientific manner, yet I trust that the simple statements I have made, will induce others who have had similar experience in that region of country or elsewhere, to contribute the results of their observations, and by uniting our efforts and ideas, an article may be produced upon this important subject possessing merit; and which may lead to the adoption of measures that will result in throwing light upon this dark subject, that will direct the practitioner in regions thus infected, to employ means that may be proposed to prevent the injurious effects of miasma.”

There is a freshness about all this that will exonerate the writer from any intention to impose upon the public, but produces a degree of astonishment that one who had ever passed his first course of lectures on medicine should have been ignorant of the best known phenomena connected with miasma. One can conceive how a man may have forgotten the source of his impressions, and concluded that the lessons he received on his mother's knee may have been the result of subsequent intuition, but what can excuse a man, especially a professor of medicine, for throwing these thoughts upon the public as original whithout having taken apparently the slightest pains to post himself on what has been already written upon the subject. Is it possible that he could have escaped reading anything on the laws of malaria? Did he not know that Joseph M. Smith (a professor also,) published a volume more than forty years ago in which he states these identical propositions, and

that for more than thirty years afterwards has reiterated them annually at the College of Physicians and Surgeons in New York? Did he never hear of Macculloch? I will quote from the latter, not because he is most to the point, but because he is the oldest author on the subject to which I have access.

"And while, in these cases, the progress of the sun upwards in the morning is the remedy for the morning mists, as the day altogether is for those of the night, this fact also seems to confirm and illustrate the same opinion, namely, that the watery or moist atmosphere is the active conductor or repository of the malaria, and that when the former is dissipated the latter is checked in its progress, possibly indeed in its production; entirely dispersed, or it may even be, destroyed. This also explains the no less common error respecting the cause of the poisonous effects of dew in hot climates, since this is obviously also a case of the propagation, possibly also of the production of malaria. It is not the dew itself which is the poison, but the fever generating gas which is united to the watery atmosphere whence it is precipitated.

"If this also explains the influence of night, generally, in propagating malaria or producing its diseases, so does that well known fact, in return, confirm the general theory in question. How truly night no less than morning and evening is the time of danger from this cause, is too well proved by the experience of Italy to need any other proof; though every where, and in every way, it is among the most received and best proved of the facts belonging to malaria and its diseases."—(*Macculloch on Malaria, Phil. ed. 1829, p. 127.*)

Certainly the professor could get access to the *Encyclopedia of Practical Medicine*. In the article on malaria he will find the following language:

"Its effects at these times (evening) is aided probably by its finding a powerful vehicle in the mists, which at night are observed to rest over low and marshy grounds. The more pernicious effects of a night air in a pestilential country and season, however it is to be explained, is familiarly known, and is often exemplified by the fatality to soldiers of certain night guards.

• • • M. Montfalcon supposes that the aqueous vapors in which the marsh poison is dissolved, are raised during the day by the heat and consequent expansion of the air, and are condensed and precipitated on the adjacent hills during the evening."

If our "Professor of the University of the Pacific" would consult La Roche on Malaria, he will find a list of from fifty to a hundred authors who have written on malaria, and before "uniting our efforts and ideas to produce an article upon this important subject possessing merit," it would be well to consult the labors of those who have gone before us. Cicero has said "To be ignorant of what was done before our time is ever to remain in a state of childhood." The British Admiralty reports relating to the coast of Africa will furnish a vast amount of reliable information on this subject.

Is it possible that the P. M. S. Co. had "Juring a period of three years," a medical officer who had to learn from experience and observation that the night air on shore should be avoided as pernicious to health? How fearfully suggestive is this confession!

SACRAMENTO, March 10th, 1860.

## Remarks on the Theory of Syphilisation.

BY W. BOEKK,

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Translated from the Portuguese of the "Gazette Medica de Lisboa," for the P. M. & S. Journal, by David Wooster, M. D.

[The following is not translated because it is entirely new, but because it contains all that is known on the subject, stated in a common-sense-like manner.

The succeeding note on a case of haematoma, the only one I ever saw, is given, not because it is unique, but because it is of very rare occurrence, and the result of causes of which we are yet ignorant.—W.]

As Syphilis (says the eminent professor,) is one of the questions of the day, let us proceed to notice the labors relating to it.

In No. 8, *Gaz Heb.*, of the present year, (1859,) I published a succinct summary of the brochure of Mr. Danielssen on syphilisation, as a curative method of syphilis and *spedalskhed*, (elephantiasis.)

In that resume I gave my theoretic reflections relative to the effect of syphilisation, and there limited myself to giving my understanding of the saturation of the organism by the chancrous virus, successive inoculations with which produce cure of syphilis, and immunity against it for the future.

In Christiana there have been hundreds of persons cured of syphilis by syphilisation. The facts cannot be denied; but how explain them is a question as interesting as it is difficult of solution.

When I observed my first cases, and that too with the greatest exactness, I judged that syphilisation, in relation to syphilis, produced in the organism a disposition analagous to that which vaccination produces in the same organism, in relation to variola and its own peculiar disease, that is, the *vaccina* or cow-pox.

This did not help us much in the understanding of the matter, for nothing is known of the manner by which vaccination itself operates.

What we are sure of, and what it concerns us above all to know, is the salient fact of immunity which vaccination confers, for a long time, against variola and vaccina. This is at least what is claimed; we shall see if it is always true. In a word, does this immunity proceed from the impregnation

of the organism with the vaccine virus, or from the destruction of the disposition which this organism possesses to contract variola or *vaccina*? One reason induces me to believe that we have nothing to do here with the destruction of an organic predisposition; namely, the children of parents who have recently had variola, come into the world without diminution of liability to the affection which their parents have already had. But because vaccination takes nothing from the organism, does it necessarily follow that it adds something to it, and especially that this something is impregnation or saturation of the humors with the virus? I am completely ignorant on this point, but I should be sorry to believe it; because a saturation of the organism with a virus must be deleterious to the individual: therefore I am inclined to admit that the disposition to contract the disease is averted or remains quiet. It does not appear in the individual, but exists in the body, because the offspring of the individual enjoying immunity, receives the aptitude to take the disease, and is born with it, and for immunity requires vaccination the same as if the parent had not been in a state of immunity.

Three women who had been syphilised gave birth to children in which the symptoms of syphilis appeared soon after birth. Would this indicate that the syphilis had not been extinguished in the mothers?

The affirmative is a mere presumption; for the syphilitic virus flows slowly through the organism, and the effect of the last inoculations continues after the ulcers have disappeared, and the patient has left the hospital. It is, moreover, requisite to take into consideration the time elapsed between a syphilisation and the moment of subsequent conception. We wait, therefore, for time to form a definitive opinion upon this point, and confine ourselves now in all that relates to syphilisation, to observe nature without preconceptions.

But let us put the case in its least favorable aspect. Let us confess that in respect to the condition of the offspring, we have gained nothing over the mercurial treatment. Still we have no cause to complain of this, seeing that the parents enjoy as perfect health as before having constitutional syphilis, and that the offspring may in turn be treated by syphilisation with much more benefit than mercurial preparations.

To anticipate here all which may be said *against* syphilisation, I acknowledge that in the last few days there has been a case of relapse, that of a man treated twenty-eight months ago. But this man had constitutional symptoms for a year before being treated. There are in such cases peculiar obstacles, concerning which I will explain my ideas on another occasion.

I now will give the reasons which lead me to suppose that syphilisation operates in a manner analagous to vaccination, and not as many have pretended, of late, simply as a derivative, that is, by producing ulcers which act excretories of the morbid matter.

I will not devote any more time to theoretical considerations. Neither will I enquire whether there are other dyscrasias which are amenable to a similar purification, nor whether there is any other malady, which, having gradually penetrated, molecule by molecule, so to speak, into the blood, may be withdrawn from the latter through the skin in the same manner by

derivatives. We should consider ourselves supremely fortunate were we able by means of cantharides to abstract tuberculosis, elephantiasis, or cancer from the body. But, unfortunately, we find ourselves in the same condition with regard to syphilis as to these diseases. But as we have just said, a truce to all theories, that we may deal with facts. I desire to relate what I have collected in a multitude of observations, and then we will decide if there is any reason in supposing that syphilisation acts in a manner analagous to vaccination.

1. When a person with constitutional syphilis is inoculated with the virus of primitive chancre, *simple* or *hard*, and is continually inoculated every three days, with the pus produced by the ulcer of the immediately preceding inoculation, the result is that a period will arrive when the inoculation will produce no effect. Is it because the matter has lost all its force? No; since if a non-syphilised individual be inoculated with the same matter, it produces as much effect as it did in the beginning of the process on the first individual.

2. If, instead of taking the matter from the last pustule, which no longer produces any result, we go back a little in the series and take it from a previous inoculation, we obtain a specific ulcer, and commencing from this new second focus, a new series of pustules may be produced in the same manner as before, with more or less close resemblance to the first in intensity, etc.

3. If two persons are inoculated at the same time, they arrive at immunity against the further action of the matter in about the same period.

But if we take matter from one to inoculate the other, and *vice versa*, the matter of the last pustules, which in one case gave negative results in one of the individuals, will give positive results in the other, and *vice versa*, that is, during the progress of two or three series of inoculations.

4. Immunity with respect to a matter occurs at the same period, whatever the number of inoculations made at each time, whether one or many.

5. When the first matter will not produce any result, if we take another matter it will give a positive result, but for a series of pustulations much less numerous than that of the first matter, etc. Thus we get pustules and series of reproductions gradually decreasing, until we obtain a result negative in consequences, no matter what species of syphilitic matter we use in inoculation. I will repeat what I have before said: *syphilitic matter finally will produce no more effect than a drop of water.*

Can the facts cited be reconciled with a particular, and, as it were, anæmic state of the skin? Undoubtedly, we would say, that the new matter is more intense, since it is efficaceous when the old is so no longer. But can this be affirmed when we recollect the inoculation with a matter of an older series, or rather when, as remarked above, in two persons inoculated during the same period with the same species of matter, the matter of one must be inoculated into the other in order to produce results?

Why, finally, does the case in which three inoculations are made at each time, reach immunity no sooner than that in which only one is made?

Let us now refer to another question which has been the subject of much doubt; that of local immunity. Before I ventured to say anything of this,

I had observed it in many instances. I conceived it so strange, that at first I thought I had deceived myself in observing it, or rather, that I should consider it the result of accidental circumstances. But in as much as it is a positive phenomenon, we must yield to the fact and study it as it presents itself. The following is what I have observed in regard to this question.

1. When one region of the body has been inoculated to immunity, the matter which will no longer affect this part will produce a positive result in another portion of the body.

2. But the effect produced in the latter part will be weaker than if the matter had been primarily inoculated in this portion.

3. As to the influence which an inoculation has upon the entire body, it is *not* indifferent whether one part or another is inoculated. When repeated inoculations have been made in the thigh, even to complete immunity of the latter, the result thereafter obtained by inoculating the arms or sides is insignificant. When, on the contrary, we begin with the arms or sides, a subsequent inoculation of the thighs produces marked results, but, nevertheless, not so much but that the influence of the anterior inoculations of the arms or sides, over the whole body may easily be recognized.

From this we see that the local immunity, far from furnishing an objection against the influence of syphilisation upon the organism, on the contrary serves to confirm our belief in its reality.

"But it is objected that this does not conform with what has hitherto been understood by the word *immunity*; nor with what has been considered as constituting the true principles of physiology; this logic is inadmissible, say the opposers." The examples to which I have referred are, nevertheless, strictly true. Nature loses none of her rights; and it is as certain that there is a reason in reference to syphilisation as to every thing else; but it remains to be seen if this fact is entirely unique, or if, on the contrary, there are not other analogous facts. At last we have returned to the beginning. I do not consider it necessary to go further to observe them. We have them, to our notion, in vaccination. In some children which I have vaccinated in the last few years, I inoculated, eight days after vaccination, the matter furnished by the latter, into the arms and thighs, and sometimes obtained in the thighs vaccine pustules more or less developed.

We here have, moreover, the same local immunity, and I see with satisfaction, that this phenomenon has recently been observed in Paris by M. Coste, who having by accident punctured the extremity of the nose with a lancet charged with vaccine matter, had upon the part a vaccine pustule, when inoculation upon the arms, which he performed at the same time with the same matter produced no result.

It is quite possible that we shall hereafter succeed by means of syphilisation, in attaining greater accuracy in our conceptions of vaccination, for in truth all the viruses do not exhibit much difference among themselves. It is our duty to ascertain carefully their analogies and differences.



There is another important point in reference to local immunity. I refer to its duration, which hitherto has been generally confounded with its existence. As I have just said, immunity may be produced in all individuals; but weeks or months after, the same individual becomes again susceptible to the impression of syphilitic virus. Hence, it is of course possible to produce pustules on him again by a primary inoculation. But these can never be developed as fully as in the first syphilisation, and it will not be possible to produce in this case more than a very limited series of pustulations. Thus we see the organism has not the same aptitude to the influence of the syphilitic virus as before syphilisation. Some time after vaccination the individual may have varioloid, and long after, even variola. We do not say that after syphilisation the organism will return to the same condition as before, and that the virus inoculated will operate with the same activity and produce successive series of pustulations equal in number and intensity to the first; but analogy renders the affirmative probable.

My observations lead me to believe that repeated inoculation of primitive syphilitic virus impresses upon the organism a universal modification perfectly analogous to that produced by vaccination. From all of which I indulge the hope of having found in this method a very efficacious auxiliary in the treatment of syphilis, and the large number of successes hitherto achieved by means of syphilisation assure me that this hope is not chimerical.

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### Cephalæmatoma, or Cranial Hæmatoma.

I HAD the first case of this very rare affection in January last.

On the 14th of January, ult., at 9½ o'clock, P. M., Mrs. ———, after an easy labor of less than two hours, was delivered of a well formed female child, weighing about seven pounds. There was observed a tumor on the right side of the head, which seemed a little strange, as the presentation was normal, the delivery not delayed nor difficult. On the next day, upon a closer inspection, the tumor was found to occupy the site of the right parietal protuberance. This tumor appeared to enlarge gradually till the 19th, when it remained stationary. On the 20th, at 12 M., being accurately measured and located, it was found to be five inches in circumference at the base, and to represent very nearly a semi-sphere. It seems to be surrounded with a ridge of bone, with its base resting on the encephalon. Its contents are manifestly fluid; it is separated from the sagittal suture by an isthmus of normal appearing skull, seven lines in width. The anterior fontanelle cannot be covered with a silver dollar; the posterior is the usual size. On pressing the tumor the anterior fontanelle protruded slightly; this at first led me into a temporary error, and made me believe the bone deficient beneath the tumor, but on examining the head more closely, I found the sagittal suture between the two fontanelles not permanently closed, so that by pressure on the sagittal

border of either of the parietal bones, I could make it sink slightly below its fellow; and on doing this the anterior fontanelle was also observed to protrude; hence, the symptom was fallacious.

Being satisfied that the apparent ridge of bone surrounding the tumor was really nothing but a partial outward reflection of the pericranium lifted by the effused fluid from the bone, I determined without further delay to empty the tumor; but lest there should be some error in the diagnosis, the crucial test was resorted to. I passed a cataract needle into the tumor quite to its base, and felt the whole nude bony foundation by moving my hand through arcs of various circles; on withdrawing the needle, a single drop of dark venous blood presented at the puncture. Further examination was postponed till the 22nd. The nurse said the child had convulsions like St. Vitus' dance, yesterday. I see no cause for them. The child is in excellent health; eats well and sleeps well, and the excretions appear normal.

On the 22nd, I introduced a fine trocar, and drew off the contents of the tumor, consisting entirely of broken down non-coagulable venous blood. No pus nor other matter. Examined under the microscope, the blood did not present a trace of fibrin; it possessed no abnormal smell, but if at all remarkable in this respect, it was so from the deficiency of any odor.

Compresses were applied to the tumor after pushing a shred of lint into the aperture left by the trocar. By this drain the little remnant of the contents of the tumor escaped. The lint was removed daily till the suppuration subsided, and the location of the tumor assumed the even appearance of the corresponding portion of the head.

Ten days after the puncture with the trocar there remained no trace of the tumor.

This tumor was evidently of intra-uterine origin, and the effusion of blood into it ceased at birth, or a very few days later; for, seven days after parturition, the contents of the tumor contained no fibrin, though the usual amount of blood corpuscles. The fibrin could not have disappeared entirely, except after some days of stasis of the blood in the tumor.

The diagnosis of this kind of tumor is very lucidly given in Condie's valuable work on diseases of children.

There is one other point to which I would call attention. The contents of the tumor were placed in a loosely corked phial, and exposed to sunlight by setting in a south window, eight hours daily, and yet up to this time, March 15th, no decomposition has taken place, there is no putrescent odor, no precipitate nor coagulation, nor change of color. The blood discs are somewhat altered in form but not apparently in quantity.

For the microscopic examination of the contents of the tumor I am indebted to my friend Dr. Trask.

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## Extraordinary Cases of Chronic Abscess of the Tibia.

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BY H. H. TOLAND, M. D.

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CHRONIC abscess of bone, which generally results from violence, is usually characterized by the following symptoms:—pain and swelling at the point injured, the former being frequently lancinating violent, distressing at night, and often intermittent. Notwithstanding long intervals of comparative ease frequently occur, the symptoms may be reproduced by causes which to the inexperienced might be considered entirely insufficient. Generally after inflammation of the medullary membrane has existed for a few weeks or months, the bone becomes swollen and painful to the touch, although the skin may retain its natural color and appearance, it sometimes presents evidences of increased vascularity. Even during the remissions, when the patient suffers so little as to be scarcely conscious of the existence of any serious difficulty in the part affected, pressure is almost always painful. The symptoms given above are those usually observed in cases of chronic abscess of the bones, but they do not always exist, as will be demonstrated by the following cases:—

### CASE I.

John Bowers, a native of Pennsylvania, aged forty years, and apparently of good constitution, at the age of ten years, while playing upon a hay-rick, fell eight or ten feet and injured his right leg, which the bone not being fractured was at the time considered of but little consequence, as he suffered no material inconvenience. Some months, however, after this occurrence, the tibia became painful two or three inches above the ankle joint, although the bone was neither enlarged nor the integument swollen or discolored. From that time until he emigrated to Oregon in 1850, he suffered for several weeks, at least semi-annually, from excessive pain in the tibia, two or three inches above the ankle joint, without either the bone or the soft parts becoming enlarged, sensitive or inflamed. After becoming a resident of Oregon, having a large family dependant upon his exertions, he was compelled to undergo greater fatigue than formerly, and consequently, the paroxysms of pain became not only more frequent, but also much more violent; during which the foot and ankle were ordematous for several inches above the articulation.

In February, 1859, after suffering about thirty years, finding that he not only had been afflicted for several months with the most intense pain, but also that his family were deprived entirely of his assistance, he came to San Francisco with the hope of obtaining relief by a surgical operation, having long since despaired of being benefited by medical treatment, as every course to which he had been subjected had proved ineffectual.

Although the pain was intense and apparently in the bone, it was neither enlarged nor sensitive to the touch, and the skin and cellular substance appeared to be perfectly healthy, which I supposed to be impossible if disease had existed so long in the medullary tissue. Being unable to determine the character of the difficulty, and thinking that the superficial nerves upon the anterior part of the leg might have been injured by the fall so seriously as to produce the symptoms, I excised a portion of the internal saphenous, but no benefit having resulted from that operation, the musculo cutaneous was divided above the seat of pain, but with the same result. He suffered so much, even after the division of these nerves, that it was necessary to administer large doses of morphia to enable him to obtain sleep. Being convinced by the result of these operations that the disease was located in the medullary structure of the bone, an incision was made upon that portion of the tibia in which he had experienced the most acute pain, on the 2nd of March, 1859; and, assisted by Dr. Trask, a triepine was applied, and the cavity of an abscess exposed, from which at least a teaspoonful of pus escaped, which was located in the centre of the bone, the internal surface of which presented not only a smooth but really a polished appearance. After remaining in San Francisco several weeks, he returned to Oregon greatly relieved, and a few months since a letter was received by which I ascertained that he had not suffered the slightest inconvenience in the leg which had been so long diseased after the external wound healed and the joints and muscles were restored to their normal condition by moderate exercise. In this case only one symptom of abscess of the bone existed, there being no other evidence either upon its external surface or in its internal texture that indicated the existence of the slightest diseased action until the medullary portion was exposed.

Whether the pain from which he had so long suffered resulted from inflammation of the medullary membrane, and that suppuration had only recently occurred, or whether pus had for many years occupied the centre of the bone, it is impossible to determine, although I think it highly probable. The result of the treatment adopted, establishes not only the propriety but also the necessity of operating in cases of this character, even when enlargement accompanied with the usual symptoms that characterize abscess of the bone do not exist.

#### CASE II.

—, aged 38 years, came to San Francisco from an adjoining county, February 28th, 1860, with extensive disease of the inferior portion of the leg, ankle and foot of the right side. The joint was greatly enlarged, and an extensive sinus existed on both sides, and extended below without involving the articulation. Upon the anterior and inferior portion of the tibia, about three inches above the joint, an opening existed which communicated with the medullary portion of the bone, and from which a profuse purulent discharge had escaped for several months. About fifteen years ago, the tibia was wounded by an axe, and a few months after the occurrence of the accident several

spicula of bone escaped, which had until then prevented the cicatrization of the wound. From that period until the spring of 1859, he occasionally suffered excessively for a few weeks, and then the difficulty would subside until only a slight tenderness on pressure remained, particularly after taking violent exercise. At the time above specified and subsequently, he suffered greatly, until the skin yielded to the distension resulting from the escape of pus from the bone in which it had no doubt been long concealed. The motion of the joint was only impaired by the thickening and induration of the skin and cellular tissue, which was inseparable from the existence of the sinuses already described, and believing it to be healthy, assisted by Drs. Wadley and Baldwin, free incisions were made by which the parietes of the sinuses were divided. The tibia was then exposed, and the opening extending into the cavity of the abscess enlarged with the triepine, which, as well as the ulcers, were filled with wet lint, and the water dressing applied. This was continued until he left the city without my consent, one week after the operation was performed, although in as promising a condition as could exist under the circumstances.

This patient suffered nearly fifteen years before the bone ulcerated sufficiently to permit the escape of the purulent secretion, and in that respect his case resembles the preceding, although it differs greatly by being accompanied not only with enlargement of the bone, but also with extensive disease of the integument in the vicinity.

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### Professor Jewett on Monsel's Salt.

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IN July last we received from Professor P. A. Jewett, of New Haven, (Yale Medical College,) a request that we would furnish him a specimen of this remedy, as he had found none in the Atlantic States that would answer the indications ascribed to its use as set forth in this Journal. (We do not wonder at the fact if the article received here is a sample of all that has issued from eastern manufacturers.) We immediately placed this order in the hands of Wm. H. Keith & Co., to fill, as we knew that the remedy was made strictly by the original formula by this house, as given by us in the February number (1858) of this Journal, and from which they have never yet deviated. It is very doubtful if any innovation on this formula can improve the remedy, and any other formula purporting to originate from others should be regarded with mistrust, having origin in profound ignorance or impudent pretension. Made by the original formula, it has never been known to fail in its indications, and we can recommend no other. After a trial of seven months, Prof. Jewett writes as follows of the effects of the remedy. We extract his remarks from a private letter to us, bearing date February 3rd, 1860 :—

"DEAR DR.,—Your letter with the salt should have been answered some time since, but I have delayed partly for the purpose of being able to give you my experience with it, and partly because I had forgotten all about it. The salt came in good order. I have had occasion to use it frequently, and have never been disappointed in the results. I have used it in several cases after the extirpation of tumors about the anus; in several cases of wounds of arteries, such as the radial, the palmer arch, the temporal, and in one case of a tumor from the inside of the cheek. I have used it freely as a local application to recent chancre with the best effect. I consider it one of the most valuable articles, for the purpose intended, we have."

J. B. TRASK.

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## Editors' Table.

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IMMEDIATELY after having written our salutatory address we were called upon to make an overland journey to the extreme southern portion of the State, bordering upon Arizona. Our line of travel lay along the route of the great overland Butterfield mail to St. Louis and Memphis via Fort Smith, Arkansas. Never in our whole experience of stage traveling have we been so comfortably cared for as upon this long journey, nearly one third of the entire route through to St. Louis. We could almost fancy that we were drawn in the chariot of the sun, with Phæton for a driver, so rapid was our flight over the plains, mountains, rivers and deserts, and our horses being equally as well fed and spirited as those he drove.

In truth, we were astonished at the reality of the excellence of everything pertaining to this great transcontinental mail route, and our wonder had not subsided, even after our return, up to a period when we were called upon in our capacity of editor, to spread before the readers of the *Pacific Medical and Surgical Journal* something to us quite as new in physis, and by no manner of means, more startling than what we found the reality to be in reference to the great, nay, exquisite excellence of the great overland mail route. We allude to a translation we give in this number from Trousseau, in reference to what he regards as the positively pernicious action of the preparations of iron in chlorosis. He is deeply impressed with this idea, for with him it amounts to the conviction of a fact. We frankly acknowledge that we listen to his discourse with startled surprise. In our time we have met some few cases wherein it was impossible, under any circumstances, to exhibit iron without such extremely clear and positive proof, that it could only be tolerated at the expense of great injury; but, at the same time, we

as frankly acknowledge that we were so wholly unprepared for the remarks of M. Trousseau, that we must take time and endeavor to examine into his statements, and decide for ourselves whether or not we shall be compelled to sustain him.

As this subject springs upon us we remember the fate of the practice by blood-letting, mercurials, etc., which at some future day we may have occasion to discuss.

During our trip to the country we were called to witness a case of a large, unhealed, deep and gaping wound of very long standing, resulting from an operation for fistula in ano, by the knife, which served, if anything was needed to confirm us in a deliberate conviction that forced itself upon us as much as sixteen years ago, of the worthily superior success that attends upon the use of a proper ligature in cases of fistula in ano over the use of the knife under any or all circumstances. Besides, it is in every way safer, and it may hereafter do good, if we can in any case or cases prevail on others to make use of the ligature in preference to the knife; to this we will always s'rive.

Numerous cases also of strictures of the urethra of very long standing were met with, in which the methods usually recommended had been quite inadequate, the strictures still remaining. Upon this subject, also, we hope to be able soon to give in our experience of a very simple and what has in our hands proved to be a very certain success. McC.

**SOLUBILITY OF DIFFERENT ALKALOIDS in Chloroform and the Fatty Oils.**—(*Jour. de Pharm. d'Anvers.*)—According to the experiments of M. Pettenkoffer, 100 parts of chloroform dissolve 0.57 of morphine, 37.17 of narcotine, 4.31 of cinchomine, 57.47 of quinine, 20.16 of strychnine, 56.79 of brucine, 51.69 of atropine, and 58.49 of veratrine.

100 parts of olive oil dissolve 0.00 of morphine, 0.25 of narcotine, 1 of cinchomine, 4.2 of quinine. 1 of strychnine, 1.78 of brucine, 2.62 of atropine, and 1.78 of veratrine. W.

**DR. KLETZINSKY**, of Vienna, (*Gaz. Heb.* 23d Dec., 1859,) has demonstrated that *uroglaucine* of Hellar, *urocyanine* of Aloys Martin, *cyanourine* or *cyanurine* of Braconnot, is identical with indigo. Dr. Kletzinsky was seven years collecting samples of uroglaucine, and in that time succeeded in getting two drachms of the blue coloring matter of urine, which he submitted to a rigid analysis. This analysis furnished the formula,  $C_{16}H_5AzO_2$ , which is that of indigo. The identity of the two substances is thus placed beyond doubt.

It is remarkable that, according to the experiments of Kletzinsky, the indigo of the urine perceptibly increases after the administration of even small doses of creosote, or of essence of bitter almonds. These facts are, however, not sufficient to establish its mode of formation in the organism; we only know that it augments, especially under the influence of certain irritations of the spinal cord or of its nerves, and in various diseases of the kidneys, and in certain diseases of the serous membranes, with exudation. W.

**PHYSIOLOGY.—ANTAGONISM OF ARTERIES AND VEINS.**—B M. Moiln, (*Gaz. Heb.* 6th Jan. 1860.)—"Considerations founded upon the anatomical structure of the vessels, and upon numerous physiological experiments, have led me," says M. Moiln, "to admit an antagonism between the venous and arterial systems. The contractions of the arteries play the part of a resistance; they retard the circulation of the organs, while their paralysis accelerates this circulation. The contractions of the veins play the part of a power; they accelerate the circulation of the organs, and their paralysis retards this circulation. The arteries are animated by nerves coming from anterior roots; the veins, by nerves coming from posterior roots." W.

**BINODIDE OF MERCURY** prepared extemporaneously for Administration in Syphilides.—(*Presse Med. Belge*)

Bichloride of mercury, - - - -	2 drachms.
Iodide of potassium, - - - -	5 $\frac{1}{2}$ ounces.
Tincture of cardamon, - - - -	2 ounces.
Water, - - - - - - - - -	2 quarts.

Dose, a teaspoonful. Each dose contains a little less than one-fourth of a grain of bichloride of mercury, and about one grain and a half of iodide of mercury. W.

**IRON CHLOROSIS AND TUBERCLES.**—Trousseau.—As the light of rational experience and critical observation is reflected upon the practice of medicine, one by one the doctrines supposed to have the force of law are proscribed as either utterly erroneous or dangerous, in consequence of complications before unknown.

For the last twenty years the use of iron in chlorosis or in any affection of the system in which there was a chronic deficiency of the normal quantity of red blood, has been thought to be indispensable; but the recent announcement of Trousseau in the hospital Hotel Dieu, of the tendency of iron to produce pulmonary phthisis, will cause the profession to think twice before giving iron in cases where there is the least apparent predisposition to tubercular disease.

M. Trousseau says, (*Gazette des Hopitaux*, 22nd Dec., 1859,) "I must refer to a medication which in times passed I advised, but which I have not advised recently, and which probably I will not recommend any more.

"At No. 10, in hall for women, lies a girl of seventeen years, whose plastic pale look reminds one of the appearance of wax; she is out of breath upon the least exercise, she has *bruit de souffle* in the large vessels, complains of facial neuralgia, has colorless blood, suppression of menstruation, and no appetite except for articles of fantastic taste.

"Examination of the chest furnishes no sign, and there is no indication of any affection of the abdominal organs.

"All of you on approaching her bed have mentally made the diagnosis, *chlorosis*, and immediately treatment by ferruginous preparations has been mentally suggested.



"This is all very natural, chlorosis and iron being united by close relation [of antithesis?—Tr.] However, I have abstained from prescribing it.

"I have certainly been the most ardent promoter in France of the therapeutic reputation of the preparations of iron, and when I published my first works upon this question, thirty years ago, there was not sold half a kilogramme a year of iron in all the drug stores of Paris. The doctrines of Broussais sink by degrees, the preparations of iron have been prescribed in certain pathological states by a certain number of physicians, then by many, and finally by infinitely too many. As for me, who have granted the letters of rehabilitation of iron, it now results that I see myself outstripped to such a degree, that to-day I am regarded as an enemy of martial preparations. The question now is to understand ourselves.

"I did order iron in cases of anæmia and chlorosis. When the interesting work of Professor Boulland was given to demonstrate to us that the direct application of the stethoscope over the great vessels enabled us to verify chlorosis in morbid conditions which formerly we were not able to discover, I was impelled by a stronger reason again to address myself to ferruginous preparations to combat them, but I never made much progress in civil practice because I did not perceive that the administration of iron tended as often to success as in the hospitals.

"Attendance in a hospital is a veritable magic lantern. We receive a large number of patients, we treat them, we heal them, or at least ameliorate their condition, then we send them away and lose sight of them. In civil practice, on the contrary, we are called soon to the patient, we pay attention to him, if anything unexpectedly happens we are recalled, and thus on; so we assist in the whole series of accidents in the same individual case, and thus a physician can, better than otherwise, instruct himself.

"I have seen then, young girls and women laboring under chlorosis, put by my advice upon a course of bitters and of iron, somewhat ameliorated, then relapse into the same state as before as soon as the treatment was suppressed. The same means were again prescribed, again they declared themselves sensibly better, but the relapse soon returned. Sometimes even, the iron did injury. In some cases, auscultation had not revealed anything to me beforehand. I examined the breast to discover, and the iron had been horribly supported. I then moderated the thoracic accidents, and when I saw them diminish I recommenced the preparations of iron; but they were struck with want of power as soon as all the symptoms most characteristic of chlorosis declared in its favor. I was forcibly struck with this assemblage of facts, and the problem was given. I am striving to disentangle myself from these unknown mystifications. It was an occurrence that has painfully affected me. The daughter of one of my best friends, aged thirteen or fourteen years, was overgrown. Her stature, very much developed, commenced in the meantime to be one in a notable manner strong, but her regular courses appeared with greater abundance than ordinary with other young girls, and chlorosis manifested itself. I prescribed iron; her color returned, and the

menstrual blood became colored. At the end of a month, the same occurrences, the same treatment, the same success. During the whole time the patient was kept under the influence of the same medication, I remarked that she was lively, gay and excited. Eight or ten days after the last administration of iron, the 15th of December, 1840, she went to see the funeral of Napoleon I. This day the thermometer descended to fifteen degrees. She was seized with a cough on returning, and almost immediately a frightful hæmoptysis with menorrhagia and accompanying epistaxis. The hæmoptysis did not affect me enormously; seeing it to coincide with the menorrhagia and epistaxis, I thought of a remedy for general hæmorrhagic.

"The following month, at the monthly period, these same things recurred. Fever lit up slowly, then soon became vehemently unquiet. Upon these contretemps a consultation was had, in which M. Louis took part. All the symptoms became aggravated, and an acute attack of galloping consumption in six weeks or two months caused the death of this young lady.

"I thought that the iron ordered by me had nothing to do with this deplorable affair. To-day, I accuse myself boldly, but I was not then entirely convinced by this sad example.

"A short time after, I was besought to attend the wife of an architect, aged from twenty-five to thirty years, and affected with chlorosis from her seventeenth year. This lady suffered cruelly from a temporo-facial neuralgia. Thinking that this neuralgia was due to the chlorosis, the existence of which could not be misapprehended, I concluded to give the patient large doses of the carbonate of iron, hoping that once master of the chlorosis I would be master also of the neuralgia. A month after, a notable change was produced in the health of this lady. Her strength and appetite returned, her color was animated, a general excitement had replaced the languor and debility, and the neuralgia remained but in memory. I ceased to see the patient, but not before having counseled her to continue the martial preparations, and to recur to them from time to time. In scarcely forty or fifty days she was seized with a flooding, and I was recalled. They told me that in the interval she was seized with a cough, a little oppression, and that every evening she had a little febrile movement. Auscultation revealed to me at the summit of one of the lungs some subcrepitant rales, with a prolonged and exaggerated noise on expiration. A just fright soon seized me. I made her immediately cease the iron, and I commenced a quite different medication; but it was too late. Six weeks after, this young lady was taken off with a galloping consumption.

"This time I took care to be apprised, and was on my guard. It chanced to me to see again in the practice of one of my confreres, three grave accidents to the lungs succeed to these recurring chlorosis treated with iron; yet although it appears to me infinitely probable that in persons predisposed to tubercular phthisis, iron administered and continued during a definite and somewhat continued period, can but favor and increase the development of these accidental productions. This great probability has become to me a

very deep certainty, and here are the reasons that have above all others convinced me. I have seen chlorotics spit blood after the employment of ferruginous preparations, and to become more chlorotic than before, and I have remarked that the more chlorosis became confirmed the less the tuberculisation declared itself; yet though it is more than twenty years that I have entertained the opinion that chlorosis excluded in some sort phthisis, or rather, that it is a sure valve of safety against the ultimate explosion of tuberculisation, not only do I not give any iron in chlorosis when there exists a marked predisposition to pulmonary phthisis, but every time I am consulted on the subject of chlorosis I interrogate the family with the greatest care, and when it happens to recount vexatious precedents, I *proscribe* energetically the use of preparations of iron.

"A young girl in our attendance lost her father some years ago. She was sixteen years old, and had been injured by an attack of apoplexy. Her mother died by disease of the chest at forty-five years of age; one of her sisters has succumbed to the melting away of tubercles, the other is very colored and coughs often. The chlorotic whom we attended did not cough at all.

"In the human family things happen absolutely as in a flock of animals. Here is, I will suppose, a tuberculous ram from which a hundred ewes have descended; think you that a certain number will not be tuberculous themselves? If this ram continues leaping during three years, the latter progeny will be infallibly affected with tubercles, when more than two or three years before, they will have had a better chance to escape an attack of the malady. The youngest then die first, and the physiological reason exists, considering their author was so much nearer to his last phase, and at the moment of copulation so much nearer to his end.

"Our patient, daughter of a phthisical mother, has lost one sister, and the other that remains, the last, is already in a way to pay the first arrears of so sad a maternal succession. In the midst of such a disaster, the chlorotic defends herself against the danger which threatened her, and as it pertains to me to protect her life, I abstain from giving her iron, and she will very probably quit the Hotel Dieu without having taken any of it. Perhaps she will one day enter one of our hospitals, and perhaps other physicians will prescribe iron for her, but I will at least be perfectly innocent of this affair. Can it be said that I wish to see her remain seriously sick? Not the least in the world. I will endeavour to support her health by the employment of bitters, of Peruvian bark, or even of nux vomica. In some cases of chlorosis I must occasionally recur to a slightly alkaline treatment, to Vichy water, and when neuralgia accompanies it, to the sulphate of quinine, to belladonna, to opium, to turpentine; finally, to an approxative alimentation; but never to ferruginous preparations, I repeat it again and again, when the deplorable antecedents are brought to my knowledge, or where there already exists indications to obscure the diagnosis."

McC.

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### Notices of Books.

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**NEW MEDICAL JOURNAL.**—We have received the first number of the *Kansas City Medical and Surgical Review*. Edited and published by G. M. B. Maughs, M. D., and T. S. Case, M. D.

THE following are among the good reasons given by the editors for starting a Medical Journal west of the Mississippi :—

“On looking over a list of American Medical Journals, it will be seen that with three or four exceptions, they are all published east of the Mississippi, and their contents too frequently the mere echo of the opinions of English physicians, leaving that portion of the Great West lying between the Mississippi and the Rocky Mountains—constituting an area of hundreds of thousands of square miles, which, though sparsely inhabited, contains at present one-eighth of the population of the United States—almost entirely dependent upon Eastern Journalists. The very remoteness of these Journals prevents the possibility of their reflecting to any considerable extent, the opinions of Western physicians, whose experience and observations, outside of their private practice, very seldom benefit the world. Hence the Western Medical mind in its vigor, affects scarcely at all the world of thought, while the effete opinions of London physicians, derived from practice in crowded hospitals, and upon the least vitalized specimens of humanity in the world, are paraded before the profession, and annunciated by the schools as precise rules of practice; as though one could successfully treat the highly vitalized western man, inured to toil in the open field, and breathing the healthy, bracing atmosphere of our prairies, with oatmeal gruel and gum water. To disabuse to some extent, the public mind of an error so dangerous, is in part the object of the *Kansas City Medical and Surgical Review*.”

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**MANUAL OF ELEMENTARY CHEMISTRY, Theoretical and Practical.** By Geo. Fownes, F. R. S., late Professor of Practical Chemistry in University College, London.

A NEW edition of this deservedly popular “class book” on chemistry, lately issued from the press of Blanchard & Lea, is before us. It is, as its author says, “in a compact and inexpensive form, an outline of the general principles of chemical science, and a history of the more important among the very numerous bodies which chemical investigations have made known to us.”

It will be found to be a most excellent introduction to the study of Miller, Graham, Gerhard, etc.

We find several additions in the present copy. It contains a drawing and description of an apparatus by which coal gas, “a most convenient fuel, may be employed in organic analysis.”

In it is also found a large addition to the list of a most deeply interesting series of organic compounds, alcohols, and the derivatives therefrom.

For most ordinary purposes this work on chemistry is quite as useful as one that would cost four times as much, and whosoever masters it may count himself a chemist. McC.

**PRACTICAL TREATISE ON THE DISEASES OF CHILDREN.** By D. Francis Condie, M. D., Fellow of the College of Physicians; Member of the American Medical Association; Member of the American Philosophical Society, etc. Philadelphia: Blanchard & Lea, and for sale by Bancroft & Co., San Francisco.

THE author of this work is too well known to the profession by his many contributions to medical science, to make anything but the mere announcement of this valuable work requisite. It is as meritorious as any work of its kind with which we are acquainted. But however much we admire the learning and style of the author, the accuracy of his diagnosis, the clear description of the pathological conditions in the numerous affections of children, in justice to ourselves we must say we do not like but very little of his treatment. It may be orthodox, but it is old orthodoxy. A great deal of his treatment is not only empirical, but it is empirical treatment which has been over and often demonstrated at the cradle of the sick child to be vicious and destructive.

But we will particularize. Take for example, vesicular bronchitis and pneumonia. What is his treatment? Antiphlogistic to the death. For what? to cut short the disease. It has been over and over shown that this cannot be done. This edition was published in 1858, and yet here is bleeding of children from the arm till a decided impression is produced on the heart! "Cups and leeches chief reliance," blisters, baths. Mercury and opium are no where forgotten, and yet they are no where less needed than in the diseases of children.

We are no better pleased with his treatment of the diarrhoea of children. Calomel and lead, and opium and ipecac, are, we submit, not the best remedies, but the worst, if there is any inference at all to be drawn from the pathology of diseases of the alimentary canal.

The treatment of cerebro-spinal meningitis is next to worthless, and yet is perhaps as good as any other, for all treatment fails in five thousand cases out of five thousand and one. Dr. Condie says the diagnosis is obscure; so it is, unless we take the pathognomic sign given by Trousseau, the "cerebral-fever blush."

In scarlatina, violent cases, "blood-letting is essential to the safety of the patient."—(p. 496.) This is beyond endurance. It helps to kill. We are to recollect, however, that "blood-letting, purging and all other depleting remedies are to be confined strictly to the early period of the stage of excitement;" *ib.* "Calomel et hyoscyamus con ipecacuanha may be required to

preserve a regular condition of the bowels, after the state of collapse has set in;" *ib.* We don't like any of this. But finally, the money this book costs will be well invested if applied to its purchase, for it contains a large amount of genuine learning on the diseases of children. W.

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**URINARY DEPOSITS:** their Diagnosis, Pathology, and Therapeutical Indications. By Golding Bird, M.D., F.R.S. Philadelphia: Blanchard & Lea, and for sale by Bancroft & Co., San Francisco.

**THIS** is a republication of the fifth London edition of this celebrated work. It contains all the matter of the London edition, and can be furnished at a much lower price. It contains 400 octavo pages printed in large type.

Our readers undoubtedly know that this work contains a large amount of positive knowledge. It belongs to the category of medical books which is yet small, that of the positive and the rational, as opposed to the immense category which contains the vast mass of so called medical learning which is hypothetical, theoretical, empirical, and often deplorably irrational. This little book is of more value than fifty volumes of old-style works on the "Theory and Practice of Medicine." W.

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**THE SCIENCE AND ART OF SURGERY,** being a Treatise on Surgical Injuries, Diseases, and Operations. By John Erichsen, Professor of Surgery and of Clinical Surgery in University College, and Surgeon to University College Hospital. Philadelphia: Blanchard & Lea, and for sale by Bancroft & Co., San Francisco.

"In preparing a Second Edition of this work for the press every page has been carefully revised. Some chapters have been almost completely re-written, the text has been considerably enlarged, and upwards of one hundred and sixty new illustrations have been introduced. The additions are almost exclusively of a practical character; my wish being to make the work a guide to the practitioner as well as a text-book to the student. Having this double object in view, I have entered with much minuteness into many practical details, which I think will be found to be as useful to the student as they are important to the practitioner. My increasing experience as a teacher leading me to fear that there is no little risk of the cultivation of the *Art* not keeping pace with the progress of the *Science* of Surgery.

"The general arrangement of this work has been preserved. It is divided into three parts:—the First Division, under the head of 'First Principles,' contains some general observations on Operative Surgery, and more specially on Amputations, together with a condensed view of the Nature and Treatment of Inflammation. The Second Division comprises the consideration of Surgical Injuries, and the Third that of Surgical Diseases.

"In considering both Injuries and Diseases it has appeared to me to be more consistent with a natural arrangement to treat 1st, of those common to all parts of the body, as Wounds, Abscesses, Ulcers, &c. 2d. The Diseases and Injuries of Special Tissues, as of the Osseous Tissue,—Fractures and Necrosis; of the Vascular Tissue,—Wounds of Blood Vessels and Aneurisms. And 3d. The Diseases and Injuries of Regions.

"The more Special Operations I have considered as part of the Treatment of the different Injuries and Diseases for which they are required; a plan that I thought would be more practically useful than to describe them apart as a separate subject. I have limited the Consideration of Affections of the Eyes to Injuries of those organs, their Diseases being a special subject that would require for its proper description more space than could be allotted to it in this work."—JOHN ERICHSEN.

To the educated surgeon this work is sufficiently comprehensive, and a mere mechanical surgeon has no business to practice the art. This latter wants works on surgery minutely descriptive, and illustrated with engravings of photographic accuracy, colored to the life. All this can never make a good surgeon, and is half superfluous to him who has first familiarized himself with the manual of the art on the cadaver and the lower animals.

There should be some high penalty attached to original experimental surgery on the living human body.

Mr. Erichsen is conservative in his *teachings*, and were such as these followed, there would be fewer of those barbarous homicides which have a tendency to degrade the scientific art of surgery to the level of that of cutting mutton chops and loin steaks elegantly. The cemeteries of San Francisco are reeking with the victims of original experimental surgery.

W.

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THE PACIFIC EXPOSITOR, edited by the Rev. W. A. Scott, D.D., for February, was received too late for our last number. The present is the ninth number of the first volume. Terms, three dollars per annum, payable in advance. Published by Geo. W. Stevens, printer, 59 Battery street, corner of California.

It is an admirably conducted religious work, and we wish it may be most eminently successful.

We being one of our good pastor's "medical friends," when his "imperious will" gives way, he occasionally sends for us, and thus by Christian rule we minister unto each other.

MCC.

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CORRECTION.—The clause in Dr. Stillman's paper, referring to Cooper as counter authority, cannot have the least professional weight, (see page 78 of our Feb. No. and p. 496 et seq. of our Dec. No.,) against Dr. Toland's word, or indeed, against that of any body.

W.

### Exchanges Received, etc.

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- British and Foreign Medico-Chirurgical Review.* January.
- The Peninsular and Independent.* Vol. II, No. 10. January.
- Southern Medical and Surgical Journal.* Vol. XVI, No. 1.
- Savannah Journal of Medicine.* Vol. II, No. 5.
- Atlanta Medical and Surgical Journal.* Vol. V, No. 4.
- Gazette Hebdomadaire* to January 6th.
- Gazette des Hopitaux* to January 12th.
- Compte Rendus* to December 26th.
- North American Medical Reporter.* Vol. I, Nos. 3 and 4.—We will not forget to credit the German Journals hereafter. It must certainly have been an oversight.
- The Medical News and Library.* February. Vol. XVIII, No. 206.
- Belmont Medical Journal*, No. 20.—The smallest Medical Journal in the world, but worth as much as some larger ones.
- L'Art. Dentaire.* December. Vol. III, No. 12.
- New York Medical Press.* Vol. III, No. 5.
- Medical and Surgical Reporter.* January. Vol. III, No. 17.
- Boston Medical and Surgical Journal.* February. Vol. LVI, to Jan. 26.
- Cleveland Medical Gazette.* January. No. 7.
- American Druggist Circular.* Vol. IV, No. 2.
- Gazetta Medica de Lisboa* to October.
- Gazetta degli Ospedali* to September, 1859.
- Bulletino delle Scienze Mediche* to September, 1859.
- Pacific Methodist* to March 16th. Edited by the Rev. O. P. Fitzgerald.—An excellent family weekly.
- The California Culturist.* Vol. II, No. 9.—More interesting to the tillers of the soil than to the gentlemen who take precedence of the undertaker.
- Oglethorpe Medical and Surgical Journal.* Vol. II, No. 5.
- Cincinnati Lancet and Observer.* Vol. III, No. 2.
- The Journal of Rational Medicine.* January.



*New York Monthly Review of Medical and Surgical Science.* Vol. XV, No. 9.

*Nashville Journal of Medicine and Surgery.* Vol. XVIII, No. 2.

*New Orleans Medical News and Hospital Gazette.* Vol. VI, No. 12.

*The Dental Cosmos.* Vol. I, No. 7.

*The Eclectic Medical Journal.* Vol. III, No. 2.

*The Journal of Materia Medica.* Vol. II, No. 2.

*American Medical Monthly.* Vol. XIII, No. 1.

*The Chicago Medical Examiner.* Vol. I, No. 2.

*Charleston Medical Journal.* Vol. XV, No. 1.

*The London Lancet.* Vol. I, No. 2.

W.

**NEW METHOD OF EXTRACTING GUNPOWDER FROM THE SKIN.**—Instead of extracting the particles of gunpowder from the skin by means of the point of a needle or bistoury, M. Busch applies to the part a solution of corrosive sublimate, five grains to the ounce. An eczematous eruption is thus excited, and the dried vesicles then contain the grains of gunpowder.—*Phil. Medical and Surgical Reporter*.

**THE TEA PLANT** is cultivated in Louisiana without any difficulty. It has shown its power to withstand the hottest days of Louisiana, and also the late freezing cold weather.

**SYRUP OF PHOSPHATE OF IRON AND MANGANESE.**—In the absence of any authorized formula for this syrup, and in answer to several correspondents, we insert the following:—

R.—Phosphate of iron,	- - - -	72 grains.
Phosphate of manganese,	- - - -	48 "
Glacial phosphoric acid,	- - - -	6 drachms.
Sugar,	- - - - -	10 ounces.
Water, sufficient to make f.	- - - -	12 "

Dissolve the phosphoric acid in a small quantity of the water, add the phosphates, and apply heat till dissolved, then add the sugar and the remainder of the water, so that the product may measure twelve fluid ounces.—*Pharmaceutical Journal*.

**SULPHATE OF LIME**, mixed with aloes, same quantity of each, is employed by the Hindoes in the treatment of intermittent fevers. Dose, eight grains four times a day.—*Med. Times and Gazette*.

THE  
Pacific Medical and Surgical Journal.

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Selections.

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From the New Orleans Medical News and Hospital Gazette.

**Fatty Degeneration of the Kidney. Albuminuria. Rheumatic Gout. Absence of General Dropsy. Uræmic Poisoning. Death. Autopsy.**

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DENNIS MARTIN, aged 46, bricklayer and boatman, was admitted October 31st, 1859. The patient was a Canadian by birth, but had lived in this city and neighborhood for thirty-five years. He stated that he had been subject to attacks of rheumatism for the previous eight years. During this period one or two attacks had occurred each year. The disease had usually continued from two to four months. Between these attacks his general health had been good. He had been accustomed to drink brandy, more or less, daily for thirty years. He estimated the average amount drank daily at about half a pint. He stated that in the attacks of rheumatism the shoulder, elbow and wrist joints had never been affected. The disease had always been limited to the knee, ankles and joints of the fingers and toes. In 1846 he had some affection of the chest, and was treated by Dr. Wedderstrandt of this city.

He was seized by one of his rheumatic attacks three days before his admission into the hospital. The left knee was affected when he entered, being swelled, reddened, hot and painful. The right knee began to be affected the day after he was admitted, and became considerably swelled, reddened, hot and painful; these symptoms then diminishing in the left knee. Both

ankles and the metatarsal joints of the great toe subsequently became affected; also the second metacarpal joint of the little finger of the right hand. There existed moderate febrile movement, anorexia and occasional perspirations. On careful examination nothing abnormal was discovered pertaining to the heart. The treatment for the first three days was the muriate of ammonia, drms. ss. three times daily. The carbonate of ammonia was then substituted, in doses of gr. x four times, and at night a dose of the sulphate of morphia.

Nov. 8th. The affection of the joints had nearly disappeared, some tenderness only remaining. There was no febrile movement; the skin was cool and moist, and he had return of appetite. The treatment was continued. On the next day the right wrist was found to be swelled, reddened, tender and painful — no other joints being affected. The carbonate of ammonia was increased to grs. lx daily; the sulphate of morphia to be given in doses of gr. ss. once or twice daily, if the pain was severe. On this day it was noted that the right foot was slightly œdematous on the dorsal surface. The patient declared that he had never had swelling of the lower extremities except in connection with his rheumatic attacks. There was no œdema of the face and no swelling of the abdomen.

On the 8th, I obtained some of the patient's urine, chiefly to ascertain if the carbonate of ammonia had rendered it alkaline. It did not occur to me that the evidence of Bright's disease would be determined by this examination. Prof. Crawcour kindly made the examination for me. The reaction with test paper was acid. The density 1.010. It was highly colored. It deposited albumen in abundance on exposing to heat and adding nitric acid. On examination microscopically the sediment was found to contain epithelial casts, oil globules and blood globules in small quantity.

Nov. 11. The right wrist, elbow and shoulder joints were affected; and the left elbow was beginning to be affected. He perspired freely. The heart sounds were normal, and there was no cardiac murmur. The urine continued to abound in albumen and also in the chlorides. It was found under the microscope to contain large waxy and epithelial casts.

Nov. 18. The joints were nearly free from the rheumatic or gouty affection, and there was no febrile movement. He complained that the ammonia occasioned nausea, and it was discontinued, the sulphate of morphia being prescribed *pro re nata*. No œdema existed. He began to sit up on this date; his general aspect was not notably morbid and his appetite was tolerably good.

Nov. 22. The patient continued to sit up daily, and his general aspect had improved. There had been no return of the affection of the joints. The treatment since the preceding record was the sulphate of morphia to procure sleep, with liniment to the tender joints, and full diet.

A quantitative analysis of the urine was kindly made by Prof. Crawcour, who furnished me with the following statement: "Color, reddish yellow — intensely acid — density 1.010. Deposits albumen copiously by heat and nitric acid. On standing, it lets fall a sediment consisting of desquamative tube casts, waxy casts, granular matter, oil globules, and a very few globules of blood. The quantity passed in twenty-four hours is far below the average, being only 28 fluid ounces (forty a low average); amount of urea 223 grains (450 a low average). There is, therefore, deficiency of water; great deficiency of urea, and a remarkable want of salt excreted. At the same time the kidney must be in a state of great disorganization, in an advanced stage of Bright's disease."

Prof. Crawcour verbally predicted to me that the patient would not probably live longer than two months, notwithstanding, as regards his present aspect and general symptoms, he seemed to be convalescing. It will be seen that his prediction was fulfilled.

Nov. 29. The patient complained of great pain in the abdomen; of frequent small dejections containing blood, and of belching wind, with relief. The abdomen was moderately tender on pressure, but not distended, and no muscular rigidity. There was moderate febrile movement — no nausea nor vomiting. The urine was quite small in quantity, from 6 to 8 ounces only being passed in the twenty-four hours; its color was red, and it deposited albumen in abundance. There had been no affection of the joints since the last record. The feet and limbs were not œdematous. The treatment consisted of anodynes by the mouth and rectum, and the bitartrate of potassa with digitalis, with a view to diuresis.

Dec. 2. The patient had reported more comfortable the two days previously, but on this date the abdominal pains were again severe, and attended with frequent, small, bloody dejections. All along he had complained of an accumulation of wind in the stomach, which was expelled from time to time, with temporary relief. The subnitrate of bismuth was prescribed, the bitartrate of potassa continued, and enemas of laudanum occasionally given.

Dec. 3. The patient on this day, when not disturbed, was constantly somnolent, and was roused with some difficulty. After replying indifferently and imperfectly to questions, he immediately relapsed into a somnolent state. The face was congested. The dejections continued to be frequent, and sometimes took place in bed. The pulse was 100, and feeble. Regarding the diarrhoea as a vicarious effort to eliminate urea from the blood, an ounce of the sulphate of magnesia was prescribed. The urine was almost suppressed. There was no œdema.

Dec. 4. On the evening of this day it was noted that the patient was moribund. The skin was cold and moist; the pulse scarcely appreciable, and not much, if at all accelerated. He was delirious, throwing himself about, and constantly desirous of being assisted out of bed to go to stool. The dejections continued to be small and frequent. I could not ascertain that any urine was passed. The skin appeared to emit a urinous odor. His vision appeared to be impaired; he directed his movements to grasp objects wrongly. The pupils were equal, and were neither dilated nor contracted, but they remained motionless on approaching a light.

Death occurred during the night.

*Post mortem examination twelve hours after death.*—The body was not emaciated; a thick layer of fat covered the abdomen. No œdema.

The right lung was attached by old, but not very strong adhesions over the upper lobe: no adhesions on the left side. The lungs were healthy.

The heart was estimated to be a little larger than the average size. There was more fat than usual on the right ventricle. The muscular tissue appeared to be healthy, but it was not examined microscopically. The left cavities contained only a few soft, black coagula. The right ventricle contained a mass of colorless fibrin closely intertwined with the tendinous cords, extending into the auricle, and sending a round prolongation into the pulmonary artery. The aortic, mitral, pulmonic and tricuspid valves were normal.

No liquid effusion existed within the pleural cavity. There was the usual amount of transparent serum within the pericardial sac.

The stomach and intestines presented externally a healthy aspect. The omentum was loaded with fat. The anterior surface of the liver was adherent by old adhesions to the abdominal walls. The organ appeared to be of the normal size. There was no evidence of recent peritonitis, and no effusion within the peritoneal sac. The bladder was empty, and firmly contracted. The stomach and intestines were not examined internally.

The kidneys were somewhat enlarged, one weighing 7 oz. and 2 dr., and the other 5 oz. and 5 dr. They were invested with a layer of fat, which extended deeply into the hilus, into the pelvis, and between the cones. The organs were lobulated. The capsule was easily stripped off, and the surface

presented a mottled, tawny aspect. The cortical portion was increased at the expense of the medullary, and in some situations the latter was nearly replaced. The cut surfaces presented a pale color, with occasional fibrous lines. In each organ was a cyst as large as a filbert, which contained a clear liquid. These were near the surface, being bounded externally by the capsule; and at the base of one of the cysts the pyramidal body was displayed. Crystals of uric acid were found in some of the pyramidal tubes. These were apparent to the naked eye as small, white, solid collections, and their character was determined by the microscope. Scrapings and thin sections of the cortical portions, under the microscope, contained fatty globules and large oil drops in great abundance, with epithelium filled with fatty granules. A faint outline of only a few malpighian bodies and convoluted tubes was discovered. Dr. Smyth, assistant surgeon of the hospital, assisted in the microscopical examination.

**REMARKS.**—The autopsy in this case revealed extreme and universal disorganization of the secreting portion of the kidneys, connected with fatty deposit. This accorded with the diminished quantity of urinary principles during life, eventuating, before death, nearly in suppression of the urine. The excretion of urea being diminished, and at length almost, or quite, arrested, uræmic poisoning was the result of the accumulation of this principle in the blood. The phenomena which occurred during the last two days of life are to be thus explained. Somnolency and mental apathy were the first symptoms, and, succeeding to these, delirium, imperfect vision, coma and death. The diarrhœa which existed for the last two or three weeks, was probably due to an effort on the part of the intestinal mucous membrane to eliminate the urinary principles accumulating in the blood. This supplementary action may have postponed for a time the toxic effects of the uræmia, but it was incompetent to prevent, at length, their development, and the fatal issue of the disease.

Several interesting pathological questions arise in connection with the facts contained in the clinical history of this case. One of these relates to the nature of the poisonous agent in the circulation, and the mechanism of its deleterious action. The excretion of urea, without doubt, is emphatically the important function of the kidneys. It is settled that this excrementitious product is pre-formed in the blood, and merely separated by the renal organs. The experiments made in 1847, by Bernard and Barreswill, of removing the kidneys in inferior animals, proved that the accumulation of urea in the blood takes place under these circumstances; that death occurs in two, three or four days, preceded often by coma and convulsions; that the gastric and intestinal secretions become more abundant after this operation, and contain the products of the decomposition of urea—viz: the salts of ammonia—in large quantity, and that vomiting and diarrhœa are constant events. The analogy between the results of these experiments and the effects of renal disease, involving disorganization, is very striking, and goes to confirm the pathological view which has just been given of the case detailed in this report. Bernard, however, in a late work,\* asserts that it is doubtful whether the accumulation of urea in the blood can be considered as constituting it a poison, in view of the fact that this principle may be injected into the veins of a living animal in large quantities, without deleterious effects; and he is disposed to think that the toxic phenomena incident to advanced Bright's disease, are due to the absorption into the blood of decomposed matter belonging to the kidney itself. But Bernard appears to overlook a very essential point of difference between the non-elimination of urea from removal or disorganizing disease of the kidneys, and the introduction of urea into the

\* *Lçons sur les Propriétés Physiologiques et les Altérations Pathologiques des Liquides de l'Organisme.* Paris: 1859.

blood, the renal organs remaining intact. In the latter case the poisonous accumulation of this principle may be prevented by a corresponding activity of the secretory functions of the kidneys: in the former case, the poisonous accumulation takes place because separation by the natural channel is prevented, and the supplementary secretion through the gastric and intestinal fluids is inadequate for the elimination save for a short period. Moreover, the production of urea within the organism vastly exceeds the quantity which can be readily introduced by injection into the veins, and this production is unceasingly going on so long as life continues. There seems no ground, therefore, to doubt that, when the secretion of urine is greatly diminished or suppressed, the toxical consequences are due, at least in a great part, to the retention of urea in the blood.

As regards the *modus operandi* of the poisonous action of urea, our knowledge is on a par with that of most poisonous agencies. Whether the urea, beyond a certain amount, becomes a poison *per se*, or by means of other principles derived from its decomposition, is not settled. Professor Frericks has adduced experiments to prove that ammoniacal salts formed from the urea, are alone deleterious, the urea, unchanged being innocuous. This is not satisfactorily established. The experiments of Bernard and Barreswill appear to show, that the urea, accumulating in the blood in consequence of removal of the kidneys, remains undecomposed, the transformation into ammonia taking place after its vicarious excretion within the stomach and intestines. It appears to be settled, that if urea remains in the blood sufficiently long in poisonous quantities, and life be not destroyed by its toxical effects on the nervous system, it is apt to give rise to inflammation of some of the serous structures. Peritonitis was developed in some of the animals from whom the kidneys were removed by Bernard and Barreswill. This, however, it may be expected, was due to the local effects of the operation. The occurrence of peritonitis, pleuritis and pericarditis, in cases of advanced Bright's disease, is probably to be explained by the action of the urea, or of the products of its decomposition, on these structures. It would be interesting to determine if serous inflammations may be produced in animals by repeated injections of urea into the veins, following up the ingenious and valuable method of research by which Dr. B. W. Richardson has shown that endocarditis may be artificially induced by the introduction into the system of lactic acid.

In the case now reported, imperfect vision was a symptom during the latter part of life. It has been ascertained by M. Millon, that urea is sometimes held in solution in considerable quantities by the vitreous humor of the eye. The question arises, whether the partial blindness may not have been owing to an accumulation of urea in that liquid. This point might have been settled, had the question occurred when the autopsy was made.

In the case reported, disease of the kidney was associated with rheumatic gout. The patient entered the hospital with the latter affection, and he had been subject to repeated attacks during the preceding eight years. The gouty character of the affection is shown by the age of the patient when first attacked, the tendency to the smaller joints, the local oedema, and the absence of any cardiac complication, notwithstanding so many attacks had been experienced. Yet, inasmuch as no gouty concretions had formed, and the larger joints were affected, as well as the smaller, I have called the affection rheumatic gout. Gout, and certain forms of Bright's disease, are not unfrequently associated; but the nature of the pathological association is not always clear. In the present case, there is ground for the inquiry, whether the gouty attacks may not have been dependent on the accumulation of uric acid in the blood, in consequence of its non-elimination by the kidneys. This principle, like urea, is a physiological constituent, both of the blood and

urine, but in much less quantity than urea. The researches of Dr. Garrod appear to show that gout is a toxic effect of an abnormal quantity of uric acid in the blood. In general, this over accumulation is probably due to an undue production of the acid, but it may also occur when the production is not excessive, but the excretion prevented. That the latter explanation is applicable to the present case, may be presumed from the improbability, exclusive of renal disease, of gout attacking a hard-working laborer, living on course fare, and probably not entitled to the affection by inheritance.

The absence of dropsy is a feature in the case worthy to be carefully noted. Here was a patient, with the kidneys so completely disorganized that death was attributable directly to uræmia, who had not at any time presented dropsy as a symptom. There was no œdema, except occasionally, in the neighborhood of the joints affected with gout, and no effusion into the serous cavities. The albuminuria, which was excessive, was discovered accidentally. There were no circumstances directing attention to the urine, and had not an examination been made with reference to another object, this symptom, perhaps, would not have been ascertained. Occasional existence of Bright's disease without general dropsy, is sufficiently established, but the latter is, perhaps, much oftener absent than is generally supposed. It is probable that the existence of Bright's disease is often overlooked, because dropsy is generally deemed an almost constant concomitant. This case illustrates the great importance of including an examination of the urine for albumen, among the points of investigation never to be omitted in any serious malady.

The value of microscopical examinations of the urine is also illustrated by this case. For these I was indebted to my distinguished friend and colleague, Prof. Crawcour, who predicted, and, as it proved, justly, an opinion that the patient would speedily die, when he appeared to be convalescing, on the evidence of disease afforded by the microscope, in conjunction with the results of chemical analysis. The presence of fat, and the large waxy casts in the sediment of the urine, showed destruction of the epithelium of the convoluted tubes, and fatty degeneration—the most hopeless form of Bright's disease. The late researches of Dr. George Johnson have rendered the microscopical examination of the urine, in cases of Bright's disease, vastly more important than the tests for the presence of albumen. In fact, the relations which these researches have established between the various kinds of renal casts and the nature and extent of the kidney affection, must be reckoned among the most valuable of the many great additions to our means of diagnosis, with which our art has been enriched within the last quarter of a century. The microscope and the stethoscope are alike instruments which the practical physician cannot afford to dispense with so well as one half the *materia medica*.

The treatment in the case which has been reported, claims but a few words. Ammonia was given with reference to the rheumatic affection, for reasons which I will not consider at this time, before the existence of renal disease was ascertained. Knowledge of the fact that urea was imperfectly eliminated, and consequently retained in the blood, would certainly not have suggested this as an appropriate remedy. The discovery of the nature and extent of the renal disease did not lead to therapeutical indications, from which much was to be expected. All that could be hoped for was the prolongation of life, by either increasing the secretory action of the kidneys, or aiding in the vicarious office of the intestinal canal. For these ends, diuretics and hydragogue cathartics were employed to some extent, but without any avail.

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From the New Orleans Medical News and Hospital Gazette

### Uterine Inflexions.

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ROKITANSKY communicates some interesting observations on the flexions of the uterus. He says the vaginal portion of the uterus of a multipara and the connected vaginal roof is formed out of a duplicature, or folding-in of the vagina, in which the lower end of the uterus takes a part. So soon as the uterus has passed into the vagina, the vagina surrounds it like a ring, the appearance being like an intussusception. In front the doubling is shorter, and is attached by loose cellular tissue. On this account the anterior lip of the vaginal portion is thicker, the vaginal roof is more shallow, and the anterior lip is, besides, deeper. After repeated labors, the sharpness of these distinctions is lost. On section of the uteri of young persons, it is seen that the vagina, after it has formed the duplicature constituting the roof, is continued into the uterus. The mucous membrane of the vagina grows into the brawny mucous membrane of the cervix, the muscular layer follows it, and runs over the cervix into the fleshy mass of the uterus. A second, outer, loose, muscular, longitudinal fibrous layer of the vagina goes, on the contrary, not into the duplicature, but passes over it outside, and spreads above over the mass of the body of the uterus. In more mature uteri, and in those which have been pregnant, there is interposed between the brawny mucous membrane of the cervix and that longitudinal muscular layer a richer mass of uterus, which, by so much the more that the duplicature is unfolded, ends more plainly in a point in the anterior lip of the vaginal portion. The shortening of the longitudinal muscular layer strengthens the inversion of the uterus in the vagina. At the anterior side of the uterus runs the round ligament, separating into two muscular bands; the upper run together at the fundus, the lower run together under an angle in the neighborhood of the os uteri internum; so that, from these four bands on the fore part of the body of the uterus, a kind of lozenge-shaped space is marked out. At the seat of union of the lower bands there strikes, in uteri of this description, a band about an inch broad in the form of a bow, the pillars of which run down close by the edge of the cervix to the vagina, and spread out on it. These fasciculi fix and especially enlarge the duplicatures. On the posterior wall of the uterus the ascending band is simply continued over the cervix into the vagina; or there proceed, also, from the end of this band, in the neighborhood of the os uteri internum, two strips of the form of a sharp bow to the vagina. The stiff, thick, strong mucous membrane of the cervix, and the remarkably thicker connective tissue on the posterior wall, does not terminate at the os uteri internum, but continues, becoming thinner, on to the body of the uterus. This stiff stratum forms the support of the mass of the body of the uterus, and the foundation of its normal upright position, and shares essentially in flexions.

Inflexion of the uterus forwards or backwards always falls in the region of the os uteri internum, where the stiff connective tissue mass is renovated, and appears as the sub-mucous connective tissue of the mucous membrane of the uterus. Flexions of the cervix but seldom happen. The stratum of connective tissue is always found less thick, looser, thinner, and even wasted away. For this reason antelexion is far more frequent and in lesser degrees, or it grows to infraction; retroflexion is less frequent, but oftener in extreme degree, and very seldom grows to infraction. Antelexion, moreover, most



commonly appears in the virgin uterus, or at least it is apparently in no relation with labor; retroflexion, on the contrary, hardly ever arises but after repeated labors (or abortions,) and is in essential relation to this state.

Virchow sums up his researches on the flexions of the uterus as follows: He believes that antelexions are more a mechanical than an organic phenomenon. 1. At the seat of infraction there is found no primary alteration of the tissue. 2. Simple relations of pressure, distinguished from actual tumors, cause no antelexions, but mostly retroflexions. 3. The fillings of the bladder and rectum cause, as one can be convinced by experiment on the dead body, distinct changes of position of the uterus. 4. These changes of position are, in like manner, no longer possible when the body of the uterus, and especially its fundus, is fixed in a certain height and on a certain level; still more, one may be satisfied, by artificial filling of the bladder, that in proportion to the distension of its walls, a stronger bowing, and even a true bending takes place. 5. In original shortening of a lateral ligament there is found in childhood only lateral dislocation and lateral inflection; in persons beyond puberty, antelexions. 6. Antelexions are more frequent in normal, retroflexions in pathological conditions of the uterine walls.

From the foregoing considerations, Virchow draws his therapeutical deductions: 1. In the history of flexions there is a period of simple predisposition, one of simple flexion, and one of flexion complicated with various inflammatory processes. 2. The predisposition is frequently given by partial forms of peritonitis, which appear with colicky attacks, and is apparently very difficult to mitigate. 3. Long retention of the urine and of feces favors the formation of flexions, especially at the time of menstruation, of child bearing, etc., and is therefore carefully to be avoided. 4. Enlargements of the uterus, especially when united with relaxation, quickly cause flexions, and the removal of these enlargements, *e. g.*, in chronic endometritis, may materially alleviate them; hence the antiphlogistic treatment of uterine catarrh, and most careful watching of the menstrual and puerperal processes are necessary. 5. A complete removal of antelexion seems, in the highest degree, doubtful, whilst in retroflexion it may be expected. 6. When flexion is connected with consecutive processes, as endo and perimetritis, a careful local treatment is necessary. Endometritis may by this means be removed; but perimetritis causes adhesions of the uterus, which the longer they endure the more they fix the flexion and hinder the improvement of position of the organ.

Virchow follows up his own researches on flexions of the uterus by some remarks on the views of Rokitsansky, related above. The atrophy at the seat of infraction is, according to Virchow, not primary or essential, for in antelexions of infantile and maiden subjects there is not the slightest alteration of the uterine wall to be found. First, menstruation, childbed, abortion, catarrh, commonly bring the changes. Of all things, flexions favor the conditions of atrophy and atomy; but in this respect further researches are wanted.

Further: the anatomical description of the uterus, as Rokitsansky gives it, is not in all points correct; for example, the mucous membrane of the cervical canal cannot be called callous, for it is here relatively thin; although it is still thinner in the body, it is in the cervix very rich in cells, and more resembling a granulation-tissue than callous. The fibro-muscular tissue of the uterus is found as well in the body as in the neck; it contains more muscular fibres and vessels in the body, and more fibrous connective tissue in the neck. Towards the mucous membrane the muscular fibres in both places cease, and there is found a distinct, apparently thick, but in the normal state by no means thick, sub-mucous layer.

From the British and Foreign Medico-Chirurgical Review.

### Osseous and Cartilaginous System.

#### *Histological Character of Bone produced by the Transplantation of Periosteum.*

BY DR. OLLIER.\*

THIS observer has given the result of his experiments upon the artificial production of bones by the transplantation of periosteum, and on the regeneration of bone after resections and complete removal. These experiments, of such vast interest to physiology and surgery, were performed upon rabbits of various sizes and under various hygienic conditions, in whom he grafted portions of the periosteum into parts outside the limits of normal ossification, and under the influence of vessels strange to such ossification; and he found that whenever portions of this membrane have been transplanted, exudations capable of ossification have been produced. At the end of a certain period the formation of true bone was the result, demonstrating that the periosteum is not only a mere limiting membranous envelope, and that a tissue may preserve its property and functions, although removed from the influence of all naturally surrounding parts. The author exemplifies especially the origin and mode of development of new bone, showing that if it proceeds from the periosteum it is not the result of transformation of its fibrous layers, first into cartilage and then into bone. The important element of this membrane engaged in the process is a layer of blastema on the inner surface so delicate that in scraping the periosteum with a scalpel it is difficult to obtain any portions of it visible without the microscope; and this blastema appears as a rule to become penetrated by calcareous salts between the fourth and twelfth days, (a period corresponding to the formation of the first osseous cavities,) but if this process fails to occur in that period, the new bone remains in part fibrous, and the development is slow and incomplete. Insufficient nourishment, suppuration of the periosteum, and other conditions, injuriously affect the process. Without digressing further, we will here state the three kinds of experiments which the author followed in the prosecution of the question. They were as follows:

1st. Those in which the portion of periosteum used was still left in more or less connection with the bone, and was grafted into the midst of muscles or under the skin, but continuing to receive vessels from the bone.

2d. Those in which the pedicle of the portion of periosteum was divided three, four, or five days after transplantation, so as to interrupt all continuity with the bone.

3d. Those in which the piece of periosteum completely detached from the bone and rest of periosteum was at once transplanted into neighboring or distant parts.

The new bone formed in any of the above ways, varying in size according to that of the transplanted periosteum, (in one case a bone almost as large as the tibia being produced,) is found at its periphery to possess a regular layer of compact osseous tissue, and to be covered by its own periosteum. It is hollowed in the interior by medullary spaces, which terminate by uniting into a relatively large cavity, and which are formed by the rarification of the bone-tissue and production of small cavities, whose walls finally give way. The

\* Brown-Sequard's *Journal de Physiologie*, p. 14, Jan. 1859.

osseous corpuscles, as observed in delicate sections under the microscope, are seen at first to be irregularly disposed, but in the compact tissue they are arranged in layers sufficiently distinct around the vascular canals; but the regularity which in natural bone is observed around the Haversian canals is here wanting, as far as hitherto has been observed. The Haversian canals are generally parallel to the axis of the bone, but their arrangement is not perfectly intelligible in some respects. The medullary spaces are full of a soft, reddish, vascular substance, like fetal medulla, and is found to contain: (a) Free nuclei (the medulocelles of Robin) and small medullary cellules with a round nucleus; (b) Plates with many nuclei, generally infiltrated with fat and granulations, and containing from three to eight nuclei analogous to free nuclei (the myeloplaques of Robin); (c) Fatty matter; (d) Some fibro-plastic elements and some fibrils of connective tissue; (e) Blood-vessels. There very often is to be observed a peculiar longitudinal groove running all along one of the surfaces of the new bone, owing to the deficient union of the parallel borders of the portion of periosteum; a similar line is also to be observed on the surface of bone reproduced after sub-periosteal resections.

The author then describes at length the method of development of bones obtained by the transplantation of periosteum, of which the following is a condensed statement: At the very commencement an effusion of lymph takes place, at first serous and then more consistent, which infiltrates the portion of periosteum and neighboring tissues. The periosteum soon becomes swelled, and its capillaries filled with blood, and on its inner surface an exudation is formed, which is distinguished from the above effusion by its greater consistence, and by its constant increase whilst the other one decreases.

At the end of four or five days an accumulation of firm, transparent, or slightly grayish material occurs within the periosteum, (for its edges are then united so as to form an envelop for the blastema.) This material is chondroid rather than cartilaginous. About the seventh or eighth day the calcareous matter begins to be deposited, a process not necessarily preceded by the formation of veritable cartilage, although sometimes we find a substance hard, elastic, and with the external characters of the latter. When once commenced the ossification advances quickly, beginning at the centre and passing to the periphery. The above-mentioned blastema is found by the microscope to be composed of a large number of free nuclei and cellules analogous to those found in embryonic tissues, imbedded in an amorphous, more or less granular substance. A few fusiform cellules or very fine fibrils are also met with; and, moreover, cellules with a single nucleus like the small cellules of the medulla, and large regular cellules with numerous nuclei like the multi-nucleated plates of the same tissue. The blastema is more abundant in proportion to the growth of the animal. Under the transplanted periosteum this layer of blastema continues to be the germ and point of departure of new bone, the various elements being formed in succession, and the intermediate substance becoming fibroid, calcareous granulations being deposited, and ossification accomplished.

In those cases in which cartilage has been found, the cellules and cavities differed from those of normal cartilage in form and grouping. The author does not appear able to account for the existence of cartilage in some cases, and its absence in others. He proceeds to detail experiments showing that neither the blood-vessels nor external layers of periosteum suffice to produce bone; a layer of blastema of embryonic cellules being necessary. These embryonic elements are seen intimately mixed at certain points with the cellular tissue and elastic fibres composing the deep layer of periosteum.

He concludes by speaking at length of the reproduction of various kinds of bone and joints after resection, and shows that after the removal of articular

extremities of two contiguous bones, the articulation is capable of regeneration if the capsule and ligaments be left continuous with the periosteum of the resected bone. As a means of diminishing the risk of suppurative inflammation of bone after amputation, and of forming the union of the stump, he suggests that the end of the bone should be covered, and the medullary cavity closed up by a piece of periosteum.

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From the American Medical Monthly.

### Treatment of Peritonitis.

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In the *New Orleans Medical News and Hospital Gazette*, Prof. Austin Flint reports a case of peritonitis, successfully treated with opium and enemas, in which the bowels were allowed to remain unmoved for eleven days. From his remarks we make the following extract: "Prof. Clark has rendered a great service to practical medicine, and to humanity, by establishing the merits of this method of treating acute peritonitis. If pursued judiciously and boldly, a large proportion of the cases which, judged by former experience, would have otherwise ended fatally, are brought to a favorable termination. The greater success in the management, however, it must be confessed, may be in part owing to the discontinuance of measures which were injurious. In this light we must regard bloodletting and cathartics. As regards bloodletting, a fair and ready way of placing before the mind its theoretical applicability to the treatment of peritonitis, is to consider the extent of surface inflamed in this disease, and the loss of blood-constituents involved in the exuded products of inflammation. The condition of a patient attacked with peritonitis is not unlike that of a person after a scald or burn, extending over a large portion of the external surface of the body. The symptoms are analogous in the two cases, and death in both cases occurs by asthenia. Bloodletting is as appropriate in the one case as in the other. Of cathartics, it is only necessary to say that they conflict with the first and great indication in the treatment of all inflammations, viz.: to maintain, as far as possible, repose of the parts inflamed. The value of opiates in cases of peritonitis consist, in fact, of the arrest of the peristaltic movements of the intestines. These remedies have held so prominent a place in therapeutics for the last half century, that it requires some moral courage on the part of the practitioner to permit the bowels to remain constipated for a fortnight or longer, and to resist the importunities of patient and friends for opening medicine."

The above opinions are so in accordance with those we have long since held, and several times advocated in print, that we quote them with pleasure. The advice of Prof. Wood, in his work on Practice, and that of Prof. Dickson, in his Elements, is not in accordance with our views of the proper treatment of peritonitis. We have lost but two cases of this disease in eleven years, and both those occurred early in our experience, in both of which, contrary to our better judgment, counsel prevailed upon us to give cathartics. We cannot help thinking that a great and favorable change would be made in the mortality of this disease, were cathartics to be entirely ignored in the treatment of the great majority of cases.

## Los Angeles County Hospital.

*To the Honorable the Board of Supervisors of Los Angeles County :—*

GENTLEMEN,—Herewith you will find a report of sick treated in the County Hospital, in charge of the Sisters of Charity. I have had charge of the Hospital since its organization, and take pleasure in stating that it has been most admirably conducted on the part of the Sisters, the patients receiving every attention. As an economical mode of taking care of the indigent sick, it is, I believe, the cheapest, and certainly very much superior in the opportunity of treating the patients well and efficiently on the part of the surgeon. Without an institution of this character, there would have been much suffering among the emigrants recently arrived, as the greater number of severe cases treated in hospital for two months past, were among this class of persons.

By reference to the report you will see the large number of syphilitic cases and delirium tremens that have been treated in hospital. I would recommend that persons having either of these diseases be not received in hospital; the first class, from the most obvious reasons, as the hospital is in charge of ladies; the second, because they are frequently unmanageable, and there is not really force in the hospital to control them, and prevent them from doing mischief.

*Report of sick and wounded received in the County Hospital of Los Angeles, from May 31st, 1858, to February 4th. 1859.*

Intermittent Fever, - - - - -	1	Syphilis, - - - - -	1
Remittent Fever, - - - - -	5	Syphilis Consec, - - - - -	7
Typhoid Fever, - - - - -	5	Rheumatism Chronic, - - - - -	2
Erysipelas, - - - - -	2	Hypertrophy of the Heart, - - - - -	2
Acute Dysentery, - - - - -	6	Scrofula, - - - - -	1
Chronic Dysentery, - - - - -	1	Contusion, - - - - -	2
Hepatitis Acuta, - - - - -	2	Incised wound, - - - - -	2
Hepatitis Chronic, - - - - -	1	Gunshot, - - - - -	2
Tonsilitis, - - - - -	1	Debility, - - - - -	1
Asthma, - - - - -	1	Ophthalmia, - - - - -	3
Bronchitis Acuta, - - - - -	1	Mentagra, - - - - -	2
Phthisis Pulmonalis, - - - - -	1	Vermes, - - - - -	1
Pneumonia, - - - - -	6	Fungus Hæmatodes, - - - - -	1
Delirium Tremens, - - - - -	6	Necrosis of Tibia, - - - - -	1
Meningitis, - - - - -	1	Caries of Rib, - - - - -	1
Paralysis, - - - - -	1	Unknown, - - - - -	2
Nephritis, - - - - -	1	Cancer of Stomach, - - - - -	1
Urinary Fistula, - - - - -	1		
Remaining, - - - - -	-		11
Dead, - - - - -	-		13
Discharged, - - - - -	-		61
Total, - - - - -	-		75

### REMARKS.

There were treated in the County Hospital, 23 Americans; 11 Mexicans; 6 Sonoranians; 9 French; 5 Irish; 4 Native Californians; 2 Germans; 2 English; 1 Portuguese; 1 Swiss; 1 Italian; and 10 Indians. There were in addition 17 private patients, treated by different physicians of the city.

## DEATHS.

George Batchelor, admitted June 19; died June 24; delirium tremens.  
 Faustino Gutierrez, admitted July 15; died July 30; fungus hæmatodes.  
 Bernardo Rocho, admitted August 7; died August 12; asthma.  
 Sestino Romero, admitted August 29; died September 23; cancer of stomach.  
 Alonzo, Indian, admitted September 20; died October 4; meningitis.  
 Margarito Chavis, admitted October 7; died October 13; hepatitis.  
 Ferrolle Contuer, admitted October 30; died November 4; delirium tremens.  
 Henry Rossu, admitted November 6; died November 13; acute dysentery.  
 James Ceinte, admitted December 19; died January 14; hypertrophy of the heart.  
 James Erwood, admitted December 29; died December 31; delirium tremens.  
 — Hernando, admitted December 31; died January 4; typhoid pneumonia.  
 Prefecto Martinez, December 31; had permit to enter hospital, died before admission; typhoid pneumonia.  
 John, Indian, admitted January 15; died January 16; typhoid pneumonia.

JOHN S. GRIFFIN, M. D.

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From the American Medical Monthly.

### Hypertrophy of the Heart.

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In the *North American Medico-Chirurgical Review* for November, Prof. Austin Flint has an article on Cardiac Hypertrophy and Dilatation, in which the following practical remarks are made: "Practitioners have aimed to diminish the hypertrophy, or prevent its further progress; and for this end potent measures have been resorted to, viz.: copious bloodlettings and other methods of depletion, low diet, and as much quietude as possible. So far from these objects of treatment being desirable, they conflict directly with conditions on which the comfort and safety of the patient depend. The practitioner should strive rather to maintain the hypertrophy, and to govern its increase in proportion to the increasing impediment to the circulation due to progressive valvular lesions. The existence of hypertrophy does not call for measures to lower the powers of the system and weaken the heart, but, on the contrary, the body should be well nourished, and the vigorous action of the ventricles promoted. Not only are depletory and debilitating measures uncalled for by the hypertrophy, but an opposite plan of treatment is indicated, viz.: a good diet, tonic remedies, and exercise, so far as it can be taken without a sense of discomfort. It is somewhat difficult at once to receive practical views diametrically at variance with those which have hitherto guided medical practice, under the sanction of high authority; but clinical observation, as well as sound pathology, shows the importance of hypertrophy as a conservative provision against the secondary and remote evils arising from valvular lesions."

These opinions are not altogether new, but we are of opinion their importance should be more extensively conceded and acted upon.

From the London Lancet.

## The Safeguards of the Eye.

THE higher phenomena of physical science are but little studied in their physiological relations. This is probably due to the rare combination of great physical acquirements with anatomical or physiological instruction. When physiology shall have assumed its rightful place amongst the studies of our higher schools and universities, we shall no longer have to complain of the barrenness of mathematical science in the explanation of vital phenomena.

M. Regnault, in an interesting paper, endeavors now to establish the respective part of the chemical rays, and the various elements of the visual apparatus, in the exercise of sight. Every one knows that light includes three varieties of rays—luminous, calorific, and chemical. The latter are especially found in the violet and ultra-violet (non-luminous) parts of the spectrum. Again, certain bodies, such as the sulphate of quinine, uranium, &c., have been shown to possess the property of fixing these rays, and thus becoming *fluorescent*.

These principles of optic science M. Regnault has proceeded to apply to the study of the optical phenomena of the eye, by the aid of some very exquisite experiments. By the help of some beautiful proceedings, he procured ultra-violet chemical rays, and assured himself that the constituent parts of the eye were fluorescent—that is, absorbent of the chemical rays. This property was well marked in the peripheric layers of the crystalline; somewhat less so in the cornea. The retina, also, is slightly fluorescent.

It results from these experiments that we may regard the lenticular apparatus of the eye as a veritable shield to the retina. Giving passage to the luminous rays, which alone are necessary to sight, and retaining the chemical rays, which might injure the retina, they must henceforth be accounted as amongst the *tutamani oculi*. If the iris and the lashes regulate the quantity, we may regard this apparatus as regulating the quality of the rays which impinge upon the optic nerve. The retina itself is slightly fluorescent. Probably, then, the retina, like the skin, is served by the absorption of a moderate proportion of these rays and injured by the excess. So, also, with the crystalline and cornea.

This limited power of fixing the chemical rays is so adapted to external nature, that the rays commonly reflected from the various objects do not contain a greater proportion of those rays than can be controlled by this remarkable provision. But on the other hand, when gazing at substances which are themselves wholly devoid of fluorescence, as sand and snow, we painfully feel the injurious influence of the excess of chemical rays reflected upon the retina. And if this trying exercise be continued, not only the retina, but the lens and cornea will suffer from the strain. The most severe results have followed such exposure.

An interesting application of these studies of M. Regnault is suggested by the fluorescent property of the glass of uranium, which has a remarkable power of protecting the sight in this respect, since its fluorescent qualities are of the highest. Those who suffer from the reflection of light,—from sand, chalk-cliff, glacier, or snow plain,—may avail themselves of such a protection. The electric light is peculiarly intolerable by reason of the excess of chemical rays; transmitted through uranium they would be less intolerable, and the invention might be thus, perhaps, more generally utilized. The researches of M. Regnault are at once scientifically interesting and highly suggestive of practical results.

From the London Lancet.

### Death from Cerebral Disease, after Ligature of the Carotid.

THE usual cause of the failure of a ligature placed upon the carotid artery is softening or some other disease of the brain, the result of defective nourishment, arising from an imperfect collateral circulation. Mr. Erichsen, in his *Science and Art of Surgery*, quotes a table of Dr. Norris, of ligature of the carotid followed by fatal cerebral disease. Out of 149 cases of deligation of this artery, 32 were fatal, 18 of these resulting from cerebral disease. Curiously enough, in 10 cases in which both carotids were tied in the same patient, and where great cerebral disturbance might have been expected, only one death ensued. Disease of the brain, then, must arise from the inequality or imperfect balance of the circulation in the two hemispheres, when one of the carotids only is ligatured, but which, nevertheless, impairs the function and power of the entire cerebrum. With these observations, we have now to state that the case of ligature of the carotid artery, applied by Mr. Stanley at St. Bartholomew's Hospital on the 26th of October, for a supposed wound of that vessel in puncturing the tonsils (see No. of *Med. News* for Jan. last, p. 1), terminated fatally, quite suddenly and unexpectedly, on the 24th ult.

Apparently, a most excellent recovery had ensued, and the patient was on the eve of leaving the hospital to spend Christmas day with his family, when he was seized with paralysis of the right side of his body, followed by insensibility, coma, and death, within four hours, as we are informed by Mr. Rogers, Mr. Stanley's house-surgeon. It appears, however, that the poor man had been complaining of his head for about a week before this event happened.

After death, the posterior part of the brain was found softened and extensively disorganized indeed, it was diffuent. A small abscess was present in its anterior, and three others in its posterior parts. There was no effusion of blood or serum. The jugular vein was sound, but the carotid artery was thickened, with suppuration in its interior up to the point of its bifurcation. Dissection further revealed a wound of the tonsillar artery, and not of the carotid, as was originally supposed.

It appears that this patient's constitution had been severely tried in various hot climates — he was in the Crimea, amongst other places; and lately was on the strike, being by trade a handicraftsman.

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**APHORISMS OF PRACTICAL SURGERY.**—Hemorrhage from the ear, accompanied with coma (consequent upon severe injuries,) almost invariably indicate fracture of the base of the skull.

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Generally in affections of the brain, the effects of purgatives on the bowels are much less powerful than usual.

Five or six grains of tartar emetic and several ounces of epsom salts will often not produce either vomiting or purging. In these cases the oleaginous purgatives, as castor oil, croton oil, etc., succeed better.—*Braithwaite's Retrospect*, part iii., p. 115.



From the Philadelphia Medical and Surgical Reporter.

### Incompetency of Druggists.

*Rahway, N. J., Feb. 16, 1860.*

MESSENGERS, EDITORS:—In reviewing a paragraph from the message of Gov. Newell, in the *Reporter* of Jan. 21st, I little expected to have my views so misconstrued, or to involve myself in a discussion with any of your readers, nor do I intend to enter into any discussion with your correspondents, knowing as I do, that your columns can be filled with matter of much more interest to medical men; but while declining any controversy, I deem it but justice to myself to set myself right before your readers.

Any one reading either of the two replies to my communication, (one of which I regret to see is anonymous,) cannot fail to be struck with the basis from which their arguments start. The writers would drag down medicine to a money basis. The one thinks that a physician's prescriptions should be so written as to allow the druggist a good profit, and to this you made an admirable reply. The other is willing to allow an ignorant, inexperienced and incompetent person to compound his prescription, because few druggists "can afford to employ competent clerks." I protest against money being made an offset against human life. I know that it is generally believed that the great sympathetic nerve of many Americans has its largest ganglion in the pocket, but when it comes to medical men being obliged to allow ignorant and incompetent persons to prepare their prescriptions and kill their patients, because it *don't pay* the druggist to employ proper clerks, then I think it is quite time that physicians *stopped prescribing altogether*. If, as "..." asserts in many places, it is "utterly impracticable to have our prescriptions compounded by those who know how to do it, then we are *morally*, and should be *legally* bound to do the business *ourselves*. We have no right to imperil a patient's life for our own convenience. The idea is monstrous, that because apothecaries cannot afford competent assistants in their stores, (and I by no means will admit such to be the case,) that we, to save ourselves a little trouble, are to allow them the chance to kill our patients with impunity. God forbid that we should ever disgrace our noble profession by such conduct, or that we should acknowledge an "irrepressible conflict" between money and human life, and expose our patients, who have literally placed their lives in our hands, to the consequences which must flow from such a doctrine. Let the manufacturers of Lawrence reap a fortune at the expense of the blackened and charred bodies of their operatives—but let every incompetent druggist in the land starve before one physician can be found who will thus wickedly expose the life of his patient that the druggist may *make money*. If to pay the druggist our patients' lives must be sacrificed, then let him go without pay. If an apothecary *must be* sustained at the peril of life, and if we, with the consequences staring us in the face, are bound to sustain him even at such a cost, in the name of humanity, and of that Book which teaches us to do to others as we would that they should do to us, let the poor creature whose life hangs upon the issue, know the facts. Tell him, as you hand him the prescription, "Send this to Mr. A.'s store; he *can't afford* to employ a clerk who knows how to compound it, but as he has the English names upon his bottles, perhaps his boy may guess enough to give it to you. If he makes a wrong guess, and you die in consequence, nobody will be to blame, for I have written every word out in full, and omitted every character, even the ancient sign of Jupiter, for fear that might perplex the

boy, who perhaps never saw it in his life. You will die by the visitation of God, and nobody will be to blame, for Mr. A. cannot *afford* to hire a clerk who understands his business." Think you your patient will be satisfied with your logic? I cannot believe that physicians are sunk so low as to allow any one to make money at the expense of their patients' lives. I fully endorse the motto, "Live and let live," and have not one word to say against the druggist accumulating his share of this world's goods, but if his path to wealth must be over the dead bodies of his victims, then I for one do not wish to be *particeps criminis*.

Now, as to my idea that druggists should be held legally responsible for all mistakes. I do not mean that they should be held responsible for an error in *writing* prescriptions; that would be preposterous; but if they understand their business they will decline to compound a prescription which they know is wrong, or that they cannot unmistakably make out. Physicians should make it a rule, and it is their duty, and a druggist has a right to demand it of them, that they should support an educated man in preference to one incompetent and ignorant, for he is really a quack, and should be frowned down by men who despise that fraternity. Take an instance: a physician gave the following prescription:

R. Creasot, f oz. ij.  
Aque, gtt. ij. M.

Signa: Use as a mouth wash.

It was taken to an educated druggist, and he of course reversed the respective quantities. Supposing that prescription to have been written without an abbreviation or character, and to have been taken to an ignorant druggist, even supposing him to have his bottles labelled in English, would that mistake have been corrected? No. I grant that the writing of such a prescription is culpable, yet the compounding of it would be equally so. It does very well for a printer to "follow copy if it goes out of the window," but it will not do for druggists. I agree with your Pittsburg correspondent that a physician should thank an apothecary who should return a prescription on account of a mistake therein, or its illegibility. A man who, instead of thanking, abused the apothecary, is unworthy of being a member of a profession which claims to be composed of gentlemen. Take again the case which recently occurred in Philadelphia, where morphia was given for quinia. The prescription was plainly written, although containing, I suppose, the usual abbreviations\* and characters. (I may remark, *en passant*, that Dr. Levick was a private pupil of Prof. Wood, yet to my certain knowledge he uses the characters in common use, and although I have enjoyed the honor of hearing the lectures of Prof. Wood, I never heard him say one word against those characters, and I am quite sure that his able colleagues use them daily.) Suppose the prescription had been written sulphate of quinia instead of quiniæ sulphatis, would the heedless boy have been any less liable to make a mistake? Most assuredly not. Who dare assert that Dr. Levick was in any way to blame? Yet I have seen long newspaper fulminations, based upon this very case, in which the medical profession was soundly berated, and, therefore, it is that I asserted that Gov. N., unintentionally, no doubt, re-echoed the popular sentiment, which *always* blames the Doctor. The other day I had occasion to prescribe some powdered alum in emetic doses, and a liniment composed of Tinct. Saponis Camph. and Ol. Terebinth. I wrote explicit directions for the use of each. The prescriptions were compounded by a boy, who wrote not one word of directions, did not label the liniment at all, and marked the package of alum as follows: "Pulv. Alum." At another

\* There were no abbreviations used in the prescription. — Eos. Mm. and Surg. Hospital.

time I ordered some tinct. aconiti rad., giving minute directions for its external use in a case of supra orbital neuralgia. The common tincture of aconite was sent, labeled "Tincture of Aconite," with no directions whatsoever. Now, I have not a doubt that had a mistake occurred in either of these cases, I would have been blamed by the public, and my reputation perhaps seriously damaged, but I suppose " \* \* " would console me by saying that the druggist could not *afford* to employ a more competent person.

The arguments (?) used by " \* \* " in favor of English labels and English written prescriptions, come with a bad grace from an educated physician, as they are but a repetition of those used by every quack, from Samuel Thomson down.

They have been so many times refuted, and their fallacy so often exposed, that I have no need to say a word in reply. If a physician has not education enough to know the official name of the medicine he prescribes, he does not deserve his diploma, (I know *one* college where he could not get it,) and had better go over at once to the homœopaths, or some other species of the genus "quack." If a druggist is not familiar with the official names, he had better serve another apprenticeship. I am "down" on quacks of every grade, whether they are quack doctors, quack druggists, quack preachers, or any other sort. I might criticise the use of abbreviations by " \* \* " which we know are not official, as "hyd. proto chlor." or "hyd. deuto. chlor.,"  
 n mercy to your readers I forbear. J. T. C.

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From the Nashville Medical Record.

### A large Aneurism by Anastomosis,

*Involving the right side of the Head and Face. Ligature to the Primitive Carotid. Death from Hemorrhage on the Fifteenth Day.*

BY PAUL F. EVE, M.D.

[We extract the following case as a very interesting one, having seen the patient before Dr. Eve operated upon him. We avail ourselves of the occasion to express our high sense of Dr. E.'s unflinching integrity in recording his unsuccessful cases—generally more instructive than those which terminate favorably. We cheerfully bear our testimony, both to the propriety of operating in the case, and the impossibility of insuring a fortunate result.—ED.]

MR. WARD, twenty-three years of age, was born in Virginia, and when a lad moved with his family to the northern part of Mississippi. When between two and four months old, a red spot was observed on the forehead above the right eye, and when from twelve to eighteen months of age, a large vascular tumor was developed in the mouth, on the right superior maxillary, involving the upper lip. At two years of age part of this growth was removed by a ligature. Within six months another operation was required in the same region. Soon after this the teeth on this side were extracted at irregular intervals, and the hemorrhage therefrom was arrested by the actual cautery. When eight years old the upper eyelid of the right side became involved by the disease. These aneurismal tumors, one above the right superciliary ridge on the forehead, another in the superior right eyelid, and a third in the upper lid, gradually increased with the growth of the patient, but did not create any

great alarm until he reached maturity, when they continued still to augment in size. Up to this period some eight or nine operations had been performed, one of such severity that the patient, though then only a boy, was tied to a chair, and it secured to a tree. The result of these attempts was to arrest the vascular disease on the superior maxillary bone, though the hemorrhagic tendency still existed in this region, as was manifested recently in chewing a hard biscuit, which was followed by profuse bleeding, being one of the most alarming he ever had. The operator on these occasions was one of the most distinguished surgeons of Virginia, who has been applied to by letter for particulars in regard to this interesting case, but without success, and the facts here detailed were received from the patient's surviving parent.

Owing to repeated hemorrhages, recourse was had to another operation in Memphis last spring, having for its object to cut off the redundant supply of blood to these arterial tumors. For a short time the effect was beneficial—they diminished in size; but in a few months they were not only re-developed, but there was recurrence of the bleedings.

Towards the last of October, Mr. W., accompanied by his stepfather, arrived in Nashville. Projecting in the prolabium of the upper lip there was now a highly vascular tumor, near the size of an egg. It occupied its centre, and extended backwards towards the base of the septum of the nose, involving of course its frænum. It was compressible, apparently filled with blood, pulsated obscurely, though the upper coronary, particularly on left side, pulsated violently. The alveolar processes of the right upper jaw-bone contained two molar teeth; the gum was tumid and very red. The right upper eyelid was enormously distended, of a scarlet hue, greatly thickened, its edge ulcerated, and which frequently bled, sometimes spontaneously, often from simply wiping the cheek upon which it rested. The eye could not be uncovered, but vision was good in it five months ago. Above the superciliary ridge on this side was located the original tumor, now the size of a turkey egg. This, and the one in the eyelid, may have communicated under the eyebrow, as they pulsated alike, and their structure was similar, but they gave out no aneurismal sound. The pupil of the left eye was dilated; there was an irregular intermitting pulse, which was first detected here—at least, the patient says, was never noticed before.

Mr. W. was under medium size, but as large and stout as a brother who visited him while here. He could take a good deal of exercise, had a fine appetite, and recuperated well after the loss of blood, and was a man of remarkable fortitude.

On the 1st of November the last operation was performed, before the class in the University. The indication was quite evident to all, (Dra. Buchanan, Jennings, Briggs, etc.,) that, as a preliminary step in it, the carotid should be tied, which was accordingly done at the usual point of selection. An incision was next made into the tumor on the forehead down to the periosteum of the os frontis. A furious bleeding was poured out from numerous arteries, which could not be arrested by lint stuffed into the wound, or by the white heat of the largest cauterizing iron, thrust into it. Ligatures were then applied to some eight or ten of the largest vessels, lint again thrust between the edges of the wound, and three sutures secured over it. The diseased eyelid was next attacked by two elliptical incisions nearly an inch deep, and the ellipsis, about an inch and a half in its shortest diameter, excised. Ligatures and sutures, but without lint or the cautery, were again employed to arrest the hemorrhage. The tumor of the lip was not opened.

A large quantity of blood was lost during this attempt to destroy these aneurisms by anastomosis, notwithstanding the ligature to the primitive carotid. The structure of them resembled the placenta, and some of the vessels were apparently as large as the radial and ulnar at the bifurcation of the brachial artery. The *ecraseur* would have been employed for the eyelid, but

for the eye itself. The patient, however, declared he could not see, when the upper lid was so reduced by the operation as to admit the light. The pupil of it was so dilated that only a small ring of the iris remained. Brandy was freely given towards the close of this formidable operation.

During the evening and night following it there was high arterial excitement. It was unaccompanied with heat or thirst, and was due in all probability to the reaction from the loss of blood. In two or three days our patient began to recover from his almost hopeless condition, and in a week could get out of the bed unaided. He had one constitutional peculiarity, and this was, that he could not rest satisfied to be left alone, and, within the time mentioned, actually raised the window to call a servant from the yard of his hotel.

On the 13th day of November, just entering upon the fourteenth day after the operation, in turning his head to receive his dinner, or soon thereafter, hemorrhage took place from the upper angle of the wound made to ligate the carotid. Up to this time his wounds had been dressed daily, and were doing well. The sutures and ligatures on the forehead and upper eyelid had all come away, and the surfaces were granulating finely. The ligature to the carotid had never been tightened, simply moved from side to side in dressing the wound. There occurred two hemorrhages pretty profuse the next day, and the patient died at half-past one A. M., on the 15th.

I think it probable that the arterial system in this patient was originally defective, or its diseased condition may have been limited to the right side of the head and face.

In placing the facts before Mr. Ward, in regard to the results of ligature to the common carotid artery, I mentioned the proportion of deaths to be about one in four; that as I had tied it three times successfully, it might be his case would in my hands prove no exception to this general estimate, and which proved unfortunately too true. It must be admitted to have been a most unpromising one, and yet demanding immediate surgical interference.

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**EXTRACT OF CONIUM.**—Recommended by Mr. Judd as likely to prove a valuable remedy in the treatment of three very fatal diseases for which we possess no specific, viz.: *hypertrophy of the heart, phrenitis, and inflammation of the medulla spinalis*. "The latter disease is one that, like Atropos in the dark, cuts the thread of life in many cases wherein the cause of death (the theca not being opened) is never discovered. In the treatment of such disease, after depletion, I should recommend that small doses of the extract of conium, without waiting for the action of purgatives, be steadily repeated every two hours, until the action of the remedy is manifested in the system, or mitigation of the symptoms ensue. In hypertrophy of the heart, the remedy should be given rather more cautiously; and by properly-graduated doses, I imagine we might regulate the hurried and forcible contractions of that viscus, and bring its action almost to nature's standard. Lastly, habitual costiveness, and want of secretion in the bowels, may often be remedied by two or three grains of extractum conii, with as much pilula hydrargyri given at bed-time; this will be slowly followed by regular evacuations. The above combination of drugs acts particularly upon the rectum; and, when the dose is too often repeated, produces in some, a sort of chronic dysentery. I throw out these hints to the profession after having witnessed the power of conium in reducing the action of the heart, to exsanguine the brain and medulla; and may safely assert, if physiological experiments teach us anything as to the nature of remedies, that then is conium a valuable auxiliary in these diseases."—*Brailhwaite's Retrospect*, part i., p. 59.

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From The Chicago Medical Journal.

## Amputation of the Thigh for disease of the Knee Joint. Transfusion of Blood.

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JOHN IRWIN, a patient affected with caries of the knee joint, and extensive suppuration for several months for caries. This patient had been advised and urged strongly to submit to amputation, but declined. When, however, it became evident that he was sinking under the disease, he consented, but delayed the operation for ten days, in which to be able to communicate with his friends. When, at length, he was prepared for the operation he seemed little likely to survive it. In order to obviate the danger from loss of blood, I had an assistant hold a bowl under the member at the moment of the incision, in order to catch the blood and stir it so as to separate the fibrin. This bowl was placed in another containing water at the temperature of 98 degrees. When the bone had been sawed, and the small vessels secured, the patient appeared to be dying from syncope. I then fixed the tube of the transfusion syringe into the femoral artery where it had been divided upon the stump, and the syringe at the proper temperature, I charged it with the difibrinated blood which had been actively agitated so as to be of a bright red color, and threw gently into the artery, nearly all the blood which had been secured. A light tremulous movement followed and for about a minute no change was perceived, but at the end of this time the respiration and the action of the heart became more regular, and he was soon as well as before the operation. The blood thrown into the artery was just two ounces.

The points of importance in this operation I conceive to be *having the blood perfectly difibrinated, kept at the temperature of from 95 to 98 degrees, and thrown in gradually without admixture of bubbles of air.* The use of difibrinated blood instead of fresh blood thrown from the vein of another person, is made in conformity with the recommendation of Dr. E. Brown Sequard, founded upon numerous experiments on animals.

The choice of the artery instead of a vein for the transfusion, was made for these reasons:—

1. It obviates the danger of fibrinous clots passing to the heart.
2. It diminishes the danger of air bubbles passing to the heart. These are the great dangers of transfusion.

This plan occurred to me as early as 1840, while attending the physiological lectures of Magendi, at the college of France. I have often seen him insert the point of a syringe into an artery and when the pressure of the blood had raised the piston, push it down again so as to return the blood into vessels from the syringe without producing thereby any injurious effect upon the animal. Several times since I have seen patients on the point of expiring after amputation and other operations, in which great arteries had been divided, and the advantage of using the blood lost, and the arteries divided for the purposes of transfusion, has each time suggested itself to my mind. But this was the first case in which the necessity of resorting to it has been so far anticipated as to induce the preparation necessary for carrying the plan into execution. This patient reacted from the effect of the operation, and for one week there seemed a prospect of recovery, but his exhausted condition and the abundant suppuration which took place from the stump, were unfavorable, and he died Jan. 20th, thirteen days after the operation.

From Wiener Med. Wochenschrift.

## Iodised Glycerine in Skin Diseases.

BY DR. RICHTER, OF VIENNA.

THIS solution is prepared after the following formula :—

R. Potassii Iodidi		
Iodini,	- - -	a a drachms i.
Glycerinæ,	- - -	drachms ii.

Add the iodide of potassium to the glycerine, and when solution is effected add the iodine. A few minutes agitation will cause a perfect dissolution.

This solution has the great advantage over alcoholic solutions of not drying; in consequence, the surfaces remain supple, and the absorption and action of the iodine is much prolonged. It should be applied to the affected part and covered with gutta percha paper, to prevent evaporation and increase the perspiration of the part. It is left untouched for twenty-four hours, and the degree of reaction regulates its further application. The application of water will readily remove all traces of the solution. This solution occasions pain, which varies in intensity and duration according to the state of the diseased part and the sensitiveness of the patient. There has, however, never been any general inconvenience. On removing the application, the healthy skin has become brown and the diseased parts paler than before. On ulcerated surfaces, no trace of iodine will be found two hours after its application. Sometimes its action has been so powerful as to produce phlyctene.

The results of Dr. Richter's experiments are, that this solution acts as a caustic; that it has really a heroic action in cases of lupus; that its efficacy is remarkable in non-vascular goitre, scrofulous ulcers, constitutional syphilitic ulcers—doubtful in primitive chancres and eczema, and useless in psoriasis.

**METHOD OF MAKING THE INCISION FOR THE EXPOSURE OF ARTERIES.**—Mr. Skey almost invariably adopts an oblique incision, generally at an angle with the artery of 45 degrees. His reasons for doing so are: that in fat subjects it is difficult to ascertain the exact line of the vessel, and that, however true the first incision may be, it does not follow, in the course of a slow and bloody operation, that the same line will be preserved; that if, from accidental circumstances, the precise position of the artery be lost, the operator is equally uncertain whether he is dissecting on the inner or on the outer side of the vessel, or upon it; that, by dividing across the direction of the vessel, he acquires a confidence, from the conviction that the artery is really under his knife; and, lastly, that he makes an external wound, within which the ligature needle is more readily carried round the artery in a fat subject, in which the vessel lies deep, than in a wound parallel to it. His objection to a directly transverse wound is, that the artery is exposed only in a transverse line, by which nothing is gained, but much may be lost. In the femoral, brachial, radial, ulnar and posterior tibial, indeed, he considers the oblique incision to be an important element of success in finding the artery with facility.—*Brailhoate's Retrospect*, part xxiii., p. 150.

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From the Louisville Monthly Medical News.

### Scarlet Fever.

BY JUNIOR EDITOR.

IN twenty-five successive cases of this disease, which have been latterly under my professional care, the treatment consisted in inunction of the parotid and submaxillary regions by an unguent composed of fifteen grains of the extract of belladonna to an ounce of simple ointment. This was applied freely and frequently as soon as the patient complained of sore throat. A piece of flannel was afterwards applied, and in no case was any other treatment adopted, except the administration of small quantities of neutral mixture during the day. In some cases of rapidly occurring tumefaction of the throat, the prompt subsidence thereof under the treatment, left no room for doubt as to its efficacy. I do not pretend to offer this mode of treatment either as a cure for Scarlet Fever, or as the sole means to be relied upon in any case, but I do claim for it a controlling power over the engorgement, and hence a prevention of those destructive ulcerations of the throat which are so much and so justly dreaded. In some cases it has seemed to have a salutary effect upon existing diarrhoea as soon as the system was influenced by the remedy.

In one case only was I compelled to discontinue its use because of its constitutional effect. I will not here discuss its *modus operandi*, but simply suggest that the experiments of physiologists in reference to the influence of the organic nerves upon glandular organs, coupled with an experience of thirteen years in its use as a restraining remedy in salivation, and a more limited but somewhat extensive observation of its influence on the mammary gland, seemed to justify, on purely rational and philosophical grounds, the adoption of the course pursued.

During a discussion some months ago in the College of Physicians and Surgeons upon the merits of belladonna treatment in profuse lactation and mammary inflammation, I took the liberty of intimating that perhaps the contradictory results of the observation of members might have obtained from a failure to distinguish between the pathological condition of the gland itself, and that of the areolar structure in relation with it, for if my views of its action be correct, it might not influence directly the latter condition, but would prove potent in the former. Since the results of the application as indicated were reported to the College, some of my friends have adopted the same course, and with the same results, viz., perfect success in every case.

They, therefore, concur with me in attributing such results to something else than mere coincidences on negative effects. They may not be, but the application is a simple, and, under judicious watchfulness, a harmless one, and I will be as free to confess its inertness as I am now anxious to press its claim to attention, so soon as my duty shall seem to indicate such a course.

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**SULPHATE OF IRON IN VARICOSE VEINS.**—Before the Kings County Medical Society, as reported and published in the November No. of the *New York Journal of Medicine*, Dr. Enos reported a case of varicose veins successfully treated by injecting *persulphate of iron*. He is of opinion that this is the first time persulphate of iron has been used for this operation, and he thinks it will prove a better preparation, because of its less irritation than the perchloride.—*American Medical Monthly*.



**ALBUMINURIA.**—Albumen is to be detected by nitric acid and heat. Albumen may be present in cholera, puerperal fever, pyelitis, gestation, or inflammation of urinary mucous membranes, but especially in

1st. *Acute Desquamative Nephritis.*—Here is inflammation or congestion characterized by fibrinous casts with blood discs, nuclei, and epithelial cells, united by fibrinous matter.

2d. *Chronic Desquamative Nephritis.*—A chronic form of last. By long-continued shedding of epithelium with the urine, in a more or less disintegrated state.

3d. *Waxy Degeneration of Kidney.*—By the discharge of waxy casts in urine, varying in size. All the cases of this kind, which Dr. Johnson has seen, have recovered.

4th. *Non-desquamative Disease.*—The elimination of some poison, as scarlet fever. There is congestion or inflammation and escape of serum, but no exfoliation of epithelium.

5th. *Fatty Degeneration.*—Large quantities of oil globules, mixed with epithelial cells and tube casts. Oil cells are known by their rounded, uniform shape, and by their broad, black margins, produced by their strong refractive power.—*Braithwaite's Retrospect*, part xxvii., p. 92.

**THE THERMIC TREATMENT IN SCIATICA.**—This patient, Dr. Smith remarked, was brought before the class for the purpose of showing a method of treatment which he had used in private practice with very satisfactory results. This man, after exposure to cold, seven months ago, was seized with intense pain in the back. The pains have continued in the right leg to this time, notwithstanding he has gone through all the course of anti-rheumatic treatment; the marks of moxas were still visible along the course of the sciatic nerve.

D. S. proposed to-day to apply the *thermic* treatment, which consisted in the application of a heated iron to the painful part. Attention was first called to this by Sir David Carlisle in 1826. The practice did not attract much attention, however, until it was renewed by Corrigan, of Dublin, and subsequently by Dr. Day in 1849. The latter had shown that only temporary, but permanent benefits resulted from it. The mode of application, as exhibited by Dr. S., is as follows: a polished disc of iron about an inch in diameter is heated in a spirit lamp until it becomes so hot that it cannot be comfortably held in the fingers. It is then applied by light touches over the course of the affected nerve; not allowing it to remain long enough on the surface to vesicate, but simply to redden. In this case the patient expressed himself as entirely relieved from pain after the operation was performed. The results, according to Corrigan and Day, were very striking.\* In some instances a single application had sufficed to cure a chronic affection; and in a case of chronic lumbago in his own practice, Dr. S. remarked, the patient, after a few applications, was made to get up and walk.—*Phil'a Med. and Surg. Reporter*.

\* Day on Diseases of Old Age. Appendix.

## Communications.

MESSENGERS. EDITORS: — Although there has been, for the last two years, but one medical journal published in this State, "a large number of the medical profession" have neither contributed to, nor aided it by their subscriptions, hoping, no doubt, by withholding both they would force the editors to abandon the undertaking, and thereby deprive those who possess both industry and talent of the only means afforded them of promoting the advancement of medical science. Finding their opposition entirely ineffectual, and dreading the consequences of its continued success, they now, as extraordinary and ridiculous as it may appear, protest against the "medical literature" found in a work they have never supported, and which if read, was at the expense of others. Dr. Stillman, of Sacramento, during his recent visit to this city, was no doubt influenced by the enemies of the *Journal* to give expression to feelings generated by envy, and disgraceful to those by whom they are entertained. The Dr. *protests* in behalf of "a large number of the medical profession in the State," which was entirely unnecessary, for I am certain there is not a subscriber who would for a moment suppose that either he, or the friends he represents, are equal to any contributor of the *Journal*, when they read the following elegantly constructed sentence: "*On what I shall write I do not ask the profession or any member of it to endorse it or any part of it. I believe they will approve,*" &c. Rich in pronouns, if nothing else. He knows there is a clique, both in San Francisco and the neighboring cities, who believe they are not properly appreciated, and would approve of any means, however unjust, to lessen the influence or injure the reputation of those who have labored faithfully to sustain the dignity and respectability of the profession in California, and who have been abundantly rewarded, both professionally and pecuniarily, for their unremitting exertions.

*Stillman.* "The dignity of medical science forbids the introduction to its journals of personal vituperation and the gratification of private animosities." This is true, and consequently his article should, in my opinion, have been excluded, as being both personal and malicious, designed chiefly to destroy the effect my articles on syphilis have produced, and diminish a practice which should satisfy the most ambitious. Such efforts, in spirit and execution, are both disgraceful and contemptible. Again, he says: "Neither is a medical journal a proper place for elementary instruction," &c. Before preparing these articles on syphilis, I had made a valuable discovery, the application of which could not be explained without describing the different forms of the disease in which it is efficacious. To accomplish this object, it was impossible to avoid availing myself of what has become the established

and common property of the profession, and to which, for practical purposes, no wise man could object. He says: "These quotations suffice to show the originality of the articles on Syphilis" In giving the history of the disease, which I thought necessary to render my articles more complete, it would have been impossible for any writer to be original. All that is expected of an author, in the historical part of a treatise, is either to communicate facts in his own language, or use quotation marks, when the words of another are employed, *which I have* invariably observed. The historical portion of my article must resemble that part of Vidal's work, because we communicate the same facts and are both indebted to the same authorities, published long before either Ricord or Vidal were known. I am, therefore, astonished that he could imagine any unprejudiced reader would believe me capable of such weakness as to claim originality in giving the history of a disease that has prevailed for centuries. Again: "I do not propose to discuss the soundness of the practical observations included, or the value of Monsel's salt in the treatment of chancre. The writer claims to have discovered its value in such cases by accident." If the Doctor had been an honest critic, this portion of my article should have received his especial attention, the "practical observations" being much more important than the history. Respecting the value of Monsel's salt, in the treatment of chancre — which as a local remedy is superior to anything yet discovered, and the efficacy of which will, ere long, be universally acknowledged, except by himself and his associates — I would advise him to read Prof. Jewett's letter upon this subject, published by Dr. Trask, in the last number of the *Pacific Medical and Surgical Journal*, which I have no doubt will be highly gratifying to one who sneers at the assertion that its efficacy was discovered by accident, without reflecting, to use the language of a distinguished author, that many of the most remarkable discoveries are attributable to accidents, noted by *observing* and *inventive* minds. The man who has the faculty to perceive that, by a different application of well-known principles, he can produce useful effects, before unknown, directly benefits mankind far more than the discoverer of the principles, which had, until then, lain dormant. To Monsel we are indebted for our knowledge of the hemostatic property of this salt — and it can not be denied that I am entitled to the credit of having discovered its efficacy as a local remedy in the treatment of syphilis — which is so important that it must soon be regarded as the most useful discovery that has been made in the treatment of this disease during the last half century. In giving this remedy to the world, I am amply rewarded for the many years devoted exclusively to the profession, if I had received no other compensation.

I think Dr. Stillman could elevate himself and benefit his associates far more by publishing *one original thought*, than by pages of detraction, solely for the purpose of injuring those who have placed themselves so far above him as to regard with scorn his puny efforts.

Before referring to his remarks upon the properties of the Potassio Tartrate of Iron, I beg leave to say that I admire and honor Ricord far more than the critic can, not only because he merits my admiration and respect,

but because he was my preceptor long before his reputation extended across the Atlantic. He at first thought that the Potassio Tartrate of Iron was especially applicable to the treatment of soft chancre, of which fact Dr. Stillman appears to be ignorant; but subsequently by his silence he retracted what had been published upon that subject, and in his lectures says that it is especially applicable to the treatment of Phagedenism, although he does not speak as positively as he should, if it really possesses specific properties: "It combats it — almost always moderates it — and most generally arrests its progress." I have not only prescribed it but have observed its effects carefully, in primary syphilis, and have always been disappointed. I am also well acquainted with other physicians, in this city, who are much better qualified to form a correct opinion upon any medical subject than the critic, who have long since ceased to use it and consigned it to oblivion.

In secondary phagedenic, or indolent ulcers, accompanied with a marked cachectic condition of the system, I administer more Potassio Tart. of Iron than any physician in the State, and when combined with the compound decoction of sarsaparilla, internally, and Monsel's salt externally, I can say that they not only combat and moderate both the local and constitutional symptoms, but also invariably arrest their progress. In primary syphilis, however, other remedies should be preferred, as they act more promptly and satisfactorily, and will protect the system much more effectually from constitutional symptoms than any ferruginous preparation. Ricord, in compiling his work of four hundred pages on syphilis, availed himself of the labor of at least three hundred and fifty authors, and I think the gentleman should have been sufficiently liberal to extend to me a similar privilege. Instead of writing with Vidal on my knee, I wrote with Bell, Ricord, Vidal, and the Dictionary of Medicine in 21 volumes before me, as well as some notes taken when a medical student, in 1834, to which I am more indebted than to any of the works above referred to, for the historical facts they contain.

Although these works were before me, their contents were not appropriated without due credit being given, as will be apparent when the extracts are read which have been paraded before the public in Dr. Stillman's criticism to prove my want of originality. The same facts are conveyed in as different language as could be employed, a proper regard to accuracy being observed, which should, without other evidence, be sufficient to convince the unprejudiced that he was influenced more by the green eyed monster than the desire to redress the imaginary wrong of "a large number of the medical profession."

The last paragraph he devotes to me is very significant, and only reiterates the abuse that has been heaped upon me for the last three or four years by the indolent, ignorant, dissipated, and envious medical men of this city, because I availed myself of the advantages California affords for the elucidation of obscure points in the treatment of surgical diseases.

Should Dr. Stillman write a useful and practical article, for a medical journal, no matter how it might be executed, it would certainly be very unkind to attribute such motives to him. The pages of a medical journal being

ing accessible only to the profession, medical men would not be very likely, judging from the specimen before me, to induce the ignorant to read the articles for the purpose of impressing upon them an exaggerated idea of the writer's learning and skill.

This charge originated in envy. He knows I have succeeded without resorting either to detraction, newspaper puffs, or medical almanacs: and how? By attending strictly and exclusively to my own business, without condescending to speak of, much less abuse, such men as Dr. Stillman and those he represents. His protest is upon record, and will remain a monument of his folly so long as a copy of the *Pacific Medical and Surgical Journal* is extant.

In conclusion, I will only say to Dr. Stillman that if he occupied a more prominent position in the profession, and had exhibited any evidence of ability in the preparation of his protest, I would regard his criticism as the highest compliment he could confer upon me. All he did or could say is that my history of the disease was not original, which I thought every reader knew, or the fact would have been announced when the first number was published, with the names of the authors consulted. I would recommend to the Doctor an old maxim, which, if strictly followed, may in future benefit him greatly: "Aim at eminence, not by trying to put others down, but by elevating yourself:" also, that in future if he should ever find any thing in a medical journal that *he already knows*, and which he calls "elementary matter," not to waste his time in reading it, for there are so many useful facts of which he is ignorant that every moment of his valuable time should be devoted to their acquisition. With this, I take my leave of Dr. Stillman, and will not notice any thing he may write in future.

H. H. TOLAND.

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## Editors' Table.

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WE disclaim all lot or part in the matter either of Dr. Stillman's article in our preceding number, or of Dr. Toland's in the present. We think the latter is a severe sequence of the former, but we cannot dictate what words shall be used by our correspondents, and we cannot refuse the privilege of *reply* to a person we have already *allowed* to be attacked; and if we admit an article it must, of course, be in the author's own language. If there was any error in the matter, it was in the publication of the first article.

We do not think such matter as these two papers contain, is calculated to increase popular respect for our *fraternity* (!) and we are sure real knowledge—science—is not advanced in this manner. The devotees of science

should be peaceable, long-suffering, slow to anger, neither envious, nor jealous, nor unforgiving. Pardon us; we did not intend to write a homily; but we sincerely beg our good friends not to ask us to publish any thing more on this or any similar subject.

We now find when too late that it only leads to personalities, and personalities cannot be admitted by us. If our friends wish to quarrel or fight, we recommend gunpowder and lead, not types and printer's ink.

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**PHLEGMON.—DIGITAL COMPRESSION.**—It has always been the object of the physician in the cure of inflammations, to diminish the force and volume of the blood in the vessels of the inflamed part. For this object, blood-letting, local or general, is resorted to; cathartics and emetics to divert the tendency of the blood towards the inflamed part; narcotics, to diminish nerve-stimulus on the arteries and heart; ergot and quinine, to act on the muscular coat of the vessels, and thus diminish the rapidity and volume of the circulating fluid; so all remedies, whatever their primary action, are desired, when given in inflammation, to produce this ultimate result indicated, namely, to diminish the impetus and volume of the blood in the vessels of the inflamed part. These remarks are suggested by reading a clinic lecture of Prof. Botto in the *Gazetta degli Ospedali*, Jan., 1860, on the subject which forms the heading of this item. He says "that he, with Velpeau, is astonished that *physicians have for so many centuries neglected to employ digital compression for the cure of congestion and inflammation.*"

The employment of arterial compression for the cure of disease is not a very late suggestion.

A few years ago this notion was so much in fashion that arterial compressions was confidently asserted a sovereign remedy in convulsions, epilepsy, inflammation, cerebral congestions, acute delirium, neuralgia, rheumatism, severe wounds (*ferite*) of articulations, complicated fractures, and, finally, even in gout.

Parry first recommended this system in some of the diseases mentioned, also in ophthalmia, to the Medical Society of London, in 1772.

Autenrieth and Trousseau resort to compression in the treatment of convulsions, Liston in maxillary neuralgia, Livingston and Kelly in acute articular rheumatism, Ludlow in gout, Onderdonck in severe wounds of the joints, and in fractures complicated with inflammation, etc., etc.

Velpeau says there is a mass of proof sufficient to recommend compression of the arteries in certain cases of disease. He cites a case of paralysis treated by ligation of the carotid artery. The operator, says Velpeau, applies the pressure to the artery in such a manner as to act as little as possible on the adjacent tissues, and while the compression should be sufficient to retard or even suspend the course of the blood, still it should not have sufficient force to cut off the intermediate circulation, or break the internal or middle coats of the artery; to this end, the compression should not be suddenly

applied in full force, and should be continued a longer or shorter time according to the case, diminished or suspended from time to time, and then re-applied and again interrupted, &c., till it is no longer needed.

The best mode to make compression is with the finger; all other methods of compression, such as the different varieties of tourniquet, have the objection that their point of support is the surrounding soft parts which are healthy, and suffer injury by compression. Also, that the returning blood should not be impeded, the satellite veins must not be compressed, which is done by all pads in spite of every precaution.

The success of Vanzetti of Padova, in the cure of aneurisms by digital compression, induced him by analogy to employ the same means in external inflammations, especially of the phlegmonous kind.

His attempts were crowned with success, and Professor Botto hastened to try this means in his clinic. G. B., 44 years old, fell down a stairway and struck upon his elbow, on which was left a slight laceration and a severe bruise. The same day he drank to intoxication; this was the 27th November. The man continued at his usual work without any inconvenience till the 3d of December. On the seventh morning after his fall, the pain and swelling called his attention to his elbow, the wound of which had not yet healed.

On the 6th of December he entered the clinic. The right arm, from the hand to the shoulder, was uniformly swollen. The skin of the arm was tense and shiny, and of a bright red color. The patient felt a burning, tense pain, which was increased to agony under pressure of the fingers. The mark of the fingers was left on the skin after pressure. The wound at the elbow was suppurating. The patient had high fever, was restless and could not sleep. The diagnosis was "traumatic diffuse phlegmon of the right arm."

The treatment was pressure to be applied by the left thumb of the patient himself, to the humeral artery in the neighborhood of the axilla. Thus the compression would necessarily be interrupted during the repose of the patient. No other treatment, except a small emollient cataplasm upon the sore on the elbow.

Patient improved daily; the 8th of December resolution nearly complete compression left off, the arm enveloped in a roller.

9th.—Still improving.

10th.—Patient leaves his bed, the arm still in bandage.

15th.—Patient leaves the hospital completely well, the sore on the elbow entirely cicatrized.

W.

**SYPHILITIC INOCULATION.**—*A legal view of the damage done by communicating this malady to a boy of ten years.*—It appears that a lad of ten years was sent to the hospital of *Antiquaille*, in Lyons, (France,) to be treated for *tigna favosa*. Two of the hospital physicians thought him a fair subject for syphilitic experiment. Without any object ending in the interest of the lad himself, but purely for scientific reasons, he was inoculated with syphilitic virus, and the disease was established in his system. Action was commenced against the doctors in the criminal court.

The counsel for the Emperor made the following points. An experiment to be lawful must come within the following restrictions:—1. The experimenter must be acquainted with the science for the further development of which he wishes to experiment, and his title must designate his fitness for the experiment he proposes or performs. 2. The cure of the patient as the only object, essential and fundamental; as, for example, the employment of a new remedy in a desperate case, when all other means have been exhausted. 3. When the experiment is for any other object than the cure of the patient, when it is merely a scientific experiment, the consent of the person to be experimented on must first be obtained. This could not be done from the infant (lad of ten years,) himself. The counsel for the Emperor then said that this case must come under the penal statute against the wanton injuring or wounding of the person of another.

Finally, all the above being granted, the judge said in consideration of the absence of intent on the part of the doctors to do injury, of their scientific purpose, and of the *little injury the lad had sustained*, [been inoculated with chancre virus for *only* a month—ED.] he would fine the chief experimenter only 100 francs, (\$20,) and the assistant experimenter 50 francs, and costs to be paid by each equally.

Thus it will be seen at a glance that in Lyons one is damaged just \$30 by having syphilis.

Ricord says one lives only thirty years after having had this disease. Is it not possible that the boy's life has been diminished twenty years? *Ergo*, a man who according to all human probability might live to be sixty years old, may be killed at forty for \$30 and costs, providing it is merely to advance science, and with no purpose of injuring the victim. W.

THE following correspondence explains itself. The Nestor of American Surgeons will be pardoned for not knowing that the late Honorable Senator left no *widow* to bemoan his untimely fate.

*San Francisco*, Sept. 30th, 1859.

DR. MOTT—Sir: You are already informed through the press of the death of the late Senator, D. C. Broderick, and its cause. If you have taken the trouble to notice the report of the autopsy, you have doubtless observed that the left pleural cavity was found nearly obliterated by "*ancient adhesions*." This brings me to the object of this note. I am informed by an intimate acquaintance of the late Senator, that so long ago as the early part of 1857, the latter applied to you for counsel concerning his lungs; and that you informed him that one of his lungs was much restrained by adhesions of the pleura. As a journalist, I am anxious to learn from yourself whether you made this diagnosis, and if so, to publish the fact. If you will have the kindness to write us in the premises, you will much oblige the *Pacific Medical and Surgical Journal* and its readers, your sincere admirers.

Very respectfully, &c.,

DAVID WOOSTER.



*New York, October 25th, 1859.*

MY DEAR SIR: Many thanks for the kind opinion expressed in your letter of the 30th ultimo. It may be that I gave a correct opinion of the condition of the chest of the late honorable Senator, but from the number of persons I see from California, from time to time, I cannot be positive that I recollect his case. If, however, his widow states it, no doubt she must be correct.

The condition of that side of the chest, as found at the post mortem, could, I apprehend, be readily detected by percussion.

With best wishes for the success of your valuable journal, believe me to be yours, very sincerely.

V. MOTT.

*Dr. Wooster.*

PROLAPSUS UTERI ON SOUTHERN PLANTATIONS.—The following (from the *New Orleans Med. News and Hosp. Gaz.*, p. 930,) show that the complacency of our dear old mother Nature is almost unlimited. When an internal organ can no longer be kept in the body, she garnishes it with external habiliments so that it can stand exposure.

"It is a very common thing, very surprising to a professional man of experience at the north, to meet with cases so frequently of procidentia of the most aggravated character and long standing on most of our southern plantations. I have often seen field hands where the uterus protruded nearly as large as a 'cocoa-nut,' and very strange to say, with very little inconvenience, although their history revealed years of suffering before that organ became covered with integuments and scarf skin resembling that on any other external part of the body."

W.

INDIAN CORN ANTI-PERIODIC.—Dr. Phillips, U. S. N., (*American Medical and Surgical Review*), Dr. Nagle, (*Nashville Journal of Medicine and Surgery*), Dr. Gambling, (*Ib.*), of Ky., say that corn meal is anti-periodic. Dr. Gambling says, "I have given it as directed by Dr. Phillips: 'Two large table spoonful one every two hours during the day, in a tumbler of water, stirred up in a gruel or wash.' It has this advantage over quinia, it can be safely given in the hot stages of intermittent fever, almost instantly allaying thirst."

We would suggest that a tumbler full of water be drank every two hours, without the corn meal, merely to see if the result will not be the same; if not, that a piece of corn cake be ate with the water, or as often as the patient is hungry; and finally, that wheat bran, and wheat flour be tried through the same mutations. Is it the starch, or the gelatin, or the coloring matter of the yellow meal that contains the anti-periodic virtue? The corn (meal) comes well acknowledged. We suppose we must try it. It tastes better and is a trifle cheaper than the sulphate of quinine. We anticipate a depression in the bark market, and advise holders to realize as soon as possible.

W.

**PERSONAL.**—We have received a private letter from the mineralogist, Signore Craveri, dated Bra, Piedmont. His numerous friends here will be glad to learn he has reached his native country without accident. He spent four months traveling in the Atlantic States after leaving this city, during which time he visited the Lake Superior copper mines, the Galena districts, etc. He did not forget to turn from minerals long enough to stand in solemn awe amid the ceaseless thunders of Niagara. He says every body was kind to him, and the four months he spent in those States are laden with more pleasant recollections than any other period of his long absence from the land of his ancestors. May he live many years to enrich his favorite science with the products of his untiring researches! W.

**KAMEYLA**—(*Rottlera Tinctoria*.)—This is a plant indigenous in India, infallible in inducing impertinent parasites to evacuate the intestines of dogs, particularly in Northern India, (see Dunglison.) It is now in high repute as a destroyer of tape-worm in man. A witty friend of ours said the other day, "It will bring six or eight feet of tape-worm from *any body*."

If there is any place in the world where an infallible tæniacure is needed, it is on the bay of San Francisco. We, individually, have seen *many* cases.

Mr. Wakelee, of this city, has a quantity of the genuine Kameyla powder from the fruit-capsule of the plant itself.

**THE INFLUENCE OF CARBONIC ACID UPON THE CICATRIZATION OF WOUNDS;**  
*Extract from a Memoir by MM. Demarquay and Chas. Leconte, read before the Academy of Natural Sciences, Dec. 5th, 1859.—(Comptes Rendus).—*  
 In a preceding memoir (say the authors) we studied the influence which certain gases exercise when injected into the cellular tissue or into the peritoneum (March 29, 1858). In a second (28th April, 1859) we showed that while oxygen, daily brought in contact with divided tendons, retarded the reparation of subcutaneous wounds (*plaies*) in a very appreciable degree and while nitrogen has no effect whatever, carbonic acid, on the contrary, accelerates the reparation of divided tendons in a wonderful manner. [If nitrogen has no effect whatever, and oxygen retards reparation of the white tissues, then, clearly, atmospheric air will retard this reparation, for it will not be maintained that the two thousandth part of carbonic acid contained in the air could appreciably modify the deleterious action of the air, which is nearly one third oxygen. If these experiments are worth anything, it must still be conceded that atmospheric air is injurious to wounds or sores, and especially to those of joints and tendons.—W.]

This fact once determined it was quite natural to expect that carbonic acid in contact with wounds of the integument, exposed to the contact of the air, would act in the same manner, that is to say, it should hasten the cicatrization considerably, if it could be kept in contact with the wound for a sufficient length of time at each application. To accomplish this object, we got M. Gariel to construct a caoutchouc *appareil* for us, something like a

sleeve or muff, which, once applied upon the affected limb, allows the latter to be enveloped in an atmosphere of carbonic acid. By these muffs we can maintain the affected limb in the carbonic atmosphere for a period of four or six hours, or even longer, at a time.

Many patinets with gangrenous ulcers, diphtiritic and other unhealthy sores, having resisted previous treatment, have been treated by us for the last two years in the surgical department of the city hospital, and they have recovered with a rapidity really remarkable. W.

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REPEATED CREATIONS OF MAN.—M. M. Radiguel sent to the Academy a second note—*On the reiterated (reiteree) creation of man and other species*. In his opinion the reality of the numerous organic creations successively reproduced, the destruction of each by a deluge, may be established by observations from three sources. 1. The nature of the different diluvial earths, (*terrains*) each one bearing its new form which is susceptible of being named and by which we can appreciate the power of destruction of those cataclysms from which no living being could escape. 2. The organic fossils which, in showing that the same species have often been reproduced, shows at the same time that they have undergone a slight modification of form at each new creation. 3. Finally, the objects of human industry, stone instruments, pottery, wrought wood and metals, the carbons themselves, indicate that the different human races which have inhabited the basins of the Rhine and the Seine, were not equally advanced in civilization when they were destroyed.—*Comp. Rendus*. W.

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### Pamphlets etc. Received.

ON THE DIFFICULTIES AND ADVANTAGES OF CATHETERISM OF THE AIR PASSAGES IN DISEASES OF THE CHEST. By Horace Green, M.D., L.L.D. &c.

A NEAT octavo of 24 pages. It contains Dr. Green's latest views on bronchial injections, and opinions of Prof. Bennett, of Edinburgh, Prof. Rokitan-sky, of Vienna, and Prof. Trousseau, of Paris, on the Whitney case, besides an analysis of over a hundred cases of chest diseases, treated by the topical plan, many of which are reported successful. W.

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ATLANTA MEDICAL COLLEGE.—Annual Announcement of Lectures in the Atlanta Medical College, for the Session of 1860, with a Catalogue of Matriculates in 1859.

THIS college seems to be in a flourishing condition, (see advertisement) and its chairs occupied by teachers of ability and character.

PROCEEDINGS OF THE CALIFORNIA ACADEMY OF NATURAL SCIENCES, for  
1858 and 1859. Part 1, volume 2.

WE have received the above volume, and are surprised at the amount of scientific investigation going on in this new city, therein evinced. It contains many new discoveries made on this side of the continent in botany, ichthyology, ornithology, entomology, paleontology, etc., etc.

It contains a list of earthquakes for the last two years, by our late colleague, Dr. Trask, (now in commission as a mineralogist in Washoe, for a gold and silver mining joint-stock company.) The following are his notes on this subject:—

EARTHQUAKES IN CALIFORNIA DURING 1858, BY J. B. TRASK, M.D.—During the past year we have had occasion to note the occurrence of eight shocks of earthquake in this State. This number is one half less than that in 1857, and one third less the number in 1856. The shocks with one exception have been unmarked by anything like violence, being little else than mere vibrations or tremors, unnoticeable by the great majority of the people. They are as follows:

Feb. 10th.—A smart shock at Kanaka Flat, Sierra Co. No time noted.

Feb. 15th.—A light shock in San Francisco at 4 h. 20 m. Was observed in the county of San Mateo, ten miles south of the city.

Aug. 19th.—A light shock in San Francisco at 22 h. 10 m. The motion was east and west and undulatory.

Sept. 2d.—A smart shock at Santa Barbara. No time given.

Sept. 3d.—A smart shock in San Jose at 0 h. 40 m. This shock was felt at Santa Cruz, 25 miles west, and was evidently more marked in strength at that locality. No damage.

Sept. 12th.—A smart shock at San Francisco at 19 h. 40 m. The motion was from north to south. There were two vibrations with undulatory movements lasting about fifteen seconds.

Sept. 26th.—A light shock at San Francisco at 1 h. 26 m.

Nov. 26th.—A heavy shock at San Francisco at 0 h. 34 m. This shock was by far the heaviest during the year, it awoke most people from slumber and created no little alarm. Persons left their beds and sought cooler situations with less attire than is usually worn. The iron pillars of the second story of the custom house have separated from the ceiling above about half an inch, and are supposed to have settled from the effects of the shock; I much doubt the alleged cause of this displacement, as the pillars below present no indication of similar disturbance. This shock was felt at Oakland, ten miles east of the city, but was not felt at Stockton, Sacramento, or Marysville. It was evidently confined to an area of ten or twelve miles.

EARTHQUAKES DURING 1859.—Jan. 25th, 20 h. 20 m.—A heavy shock of earthquake was felt in Trinity and Shasta counties. It was felt at Weaver-ville, Shasta and Horsetown.

April 4th, 13 h.—Quite a severe shock was felt at San Jose. There were several vibrations, apparently from north to south.

August 10th, 22 h. 35 m.—A smart shock was felt in this city, (San Francisco.)

Sept. 26th, 6 h. 10 m.—A smart shock at San Francisco.

Oct. 5th, 12 h. 18 m.—A very smart shock at San Francisco,

Nov. 27th, 19 h. 15 m.—A light shock at San Francisco,

Dec. 1st, 0 h. 50 m.—A smart shock at San Francisco. Felt at Oakland and Benicia.

Dec. 2d, 14 h. 10 m.—Several successive shocks were felt at San Bernardino; some of them were quite heavy, causing much alarm. No damage was done.

Whole number of shocks during this year was eight.

The following note by Dr. Veatch, of this city, must complete our extracts from this valuable summary of scientific labors:—

**BORACIC ACID IN THE SEA-WATER OF THE PACIFIC ON THE COAST OF CALIFORNIA, BY JOHN A. VEATCH.**—The existence of Boracic Acid in the sea-water of our coast was brought to my notice in July, 1857. I had, in the month of January of the previous year, discovered borate of soda and other borates in solution in the water of a mineral spring in Tehama county, near the upper end of the Sacramento Valley. Prosecuting the research, I found traces of Boracic Acid—in the form of borates—in nearly all the mineral springs with which the State of California abounds. This was especially the case in the coast mountains. Borate of soda was so abundant in one particular locality that enormous crystals of that salt were formed at the bottom of a shallow lake, or rather marsh, one or two hundred acres in extent. The crystals were hexahedral with beveled or replaced edges, and truncated angles; attaining the size, in some cases, of four inches in length by two in diameter, forming splendid and attractive specimens. In the same neighborhood, a cluster of small thermal springs were observed holding free boracic acid in solution. A few hundred yards from these, a great number of hot springs, of a temperature of  $212^{\circ}$  Fr., rose up through the fissures of a silicious rock. These springs held a considerable quantity of borax, as well as free boracic acid. Many other localities furnished similar indications, but in a less extensive form.

In progress of the examination I found that the common salt (chloride of sodium) exposed for sale in the San Francisco market, and which, it was understood, came from certain deposits of that article on the sea-margin in the southern part of the State, also furnished boracic acid. I was led to attribute it to the fact of mineral springs emptying into the lagoons furnishing the salt. It was, therefore, a matter of no small surprise, when on a visit to the localities, I found no trace of acid in any of the springs in the adjacent district. This led to an examination of the sea-water, and a detection of an appreciable quantity of boracic acid therein. It was at Santa Barbara where I first detected it, and subsequently at various points from San Diego to the Straits of Fuca. It seems to be in the form of borate of soda, and perhaps of lime. The quantity diminishes toward the north. It is barely perceptible in specimens of water brought from beyond Oregon, and seems to reach its maximum near San Diego.

This peculiarity seems to extend no great distance seaward. Water taken thirty or forty miles west of San Francisco gave no trace of acid. In twelve specimens, taken at various points betwixt this port and the Sandwich Islands, furnished me by Mr. Gulich, of Honolulu, only that nearest our coast gave boracic acid. In ten specimens kindly furnished me by Dr. W. O. Ayers, taken up by Dr. J. D. B. Stillman, in a trip of one of the Pacific mail steamers from Panama to this place, no acid was discovered south of the Cortez Shoals.

I have not as yet been able to obtain specimens of water south of San Diego, nearer the shore than the usual route of the mail steamers. Neither have I been able to test the breadth of this boracic acid belt any further than the fact above stated, of no acid being found at the distance of thirty

or forty miles west from the Golden Gate. I think it probable that it is confined within the submarine ridge running parallel with the coast, the southern portion of which is indicated by certain shoals and island groups. The source of the acid is undoubtedly volcanic, and the seat of the volcanic action is most likely to exist in this submerged mountain range. It strengthens the probability of the eruptive character of the Cortez Shoals.

I hope in future to be able to make more accurate and extended examinations, unless some one more capable of doing justice to the subject should take it in hand. With this view, I solicited the attention of Dr. J. S. Newberry to these facts while he was in this city, on his way to join Lieutenant Ives' Colorado Exploring Expedition, hoping he might think it worthy of investigation during his stay on this coast. With the same view, I now submit them to the Academy.

This volume of proceedings is a neat octavo, well got up in every way, and contains abundant evidence of that kind of scientific ability of which California has reason to be proud.

W.

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**CASSELL'S ILLUSTRATED FAMILY BIBLE.**—We have received the first part of this beautiful work. This number includes the first eighteen chapters in Genesis, illustrated by thirty-two engravings on wood. It is in large quarto form, and contains copious marginal references. In addition to the sacred text, there is a vast amount of matter taken from the works of reliable travelers in the east, from the ancient classics, and from the works of Colonel Taylor, Mr. Layard, etc., on the antiquities of Asia and Africa.

This work is absorbingly interesting to the young—they will read both text and commentary to get "the story" of the "pictures." It will do more towards popularizing the sacred Scriptures than any method ever yet employed. It will be completed in about fifty parts; each part will cost fifteen cents in New York. The postage is one cent per copy, if paid three months in advance. Published by John Cassell, New York.

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**NEW MEDICAL JOURNAL.**—*Louisville Medical Journal*, February, 1860; edited by Thomas W. Colescott, M.D.; John R. Timberlake, M.D., publisher and proprietor. Subscription, \$3 per annum, in advance; Louisville, Ky.

THIS is a fine looking Medical Journal, containing 64 pages of reading matter. In the salutatory the editor says:—

"In accepting the proffered editorial management of the *Louisville Medical Journal*, we simply stipulated that it should not be the organ of any school, or party, or clique—of any man or of any set of men—but that it should stand, as it were, fairly and squarely in its own shoes, appealing to the whole profession, free to uphold the right wherever it might be found, and free to oppose the wrong wherever that might be found.

"So, after an interval of eleven years, we find ourselves connected again with a journal of medicine."

W.

LONG ISLAND COLLEGE HOSPITAL, AT BROOKLYN, NEW YORK.—The first Course of Lectures in this Institution commenced on Thursday, March 29, 1860, to continue sixteen weeks.

*Board of Regents.*—Hon. Samuel Sloan, President; Livingston K. Miller, Esq., Secretary.

*Council.*—T. L. Mason, M.D., Wm. H. Dudley, M.D., C. L. Mitchell, M.D., and J. W. Henry, M.D.

*Professors.*—Austin Flint, M.D., (New Orleans School of Medicine), Professor of Practical Medicine and Pathology; Frank H. Hamilton, M.D., (University of Buffalo,) Professor of Surgery; James D. Trask, M.D., Professor of Obstetrics and Diseases of Women and Children; R. Ogden Doremus, M.D., (New York Medical College,) Professor of Chemistry and Toxicology; Joseph C. Hutchinson, M.D., Professor of Surgical Anatomy and Operative Surgery; John C. Dalton, M.D., (College of Physicians and Surgeons, N. Y.,) Professor of Physiology and Microscopic Anatomy; De Witt C. Enos, M.D., Professor of General and Descriptive Anatomy; Edwin N. Chapman, M.D., Professor of Materia Medica and Therapeutics.

*Demonstrator of Anatomy*—J. G. Johnson, M.D.

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HYGIENIC AND LITERARY MAGAZINE. M. A. Malsby, Editor and Proprietor, Atlanta, Ga., Vol. I, No. 1, Jan., 1860.

This is a well got up periodical of 58 pages, edited with taste and ability. We cordially place it on our exchange list, and wish its editor success. Terms \$2 per annum.

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ADAIR COUNTY MEDICAL SOCIETY. President's Annual Address, and Medico-Topographical Report of Adair county, Mo. Published by order of the Society.

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THE note from the Librarian of the University of Michigan with inclosed is received.

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From the New Orleans Medical and Surgical Journal

### Medical Chronology.

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[IN 1824, the editor of the *Æsculapian Register* commenced the publication of a series of chronological tables, giving the chronological history of the world, and that of medicine, in parallel columns, which, however, owing to the discontinuance of the periodical, he never completed. In his preface he says:

“We commence a chronological table, to facilitate a knowledge of the history of medicine. It is translated from the excellent work of Sprengel, who appears to have taken much pains in its construction; and we can only

add, that we wish such encouragement could be given by the medical profession, as would warrant the printing of his whole work. It would amply remunerate every proprietor of a copy, at least, if we may judge from the advantage we have ourselves derived from its perusal. A complete History of Medicine is scarcely to be found in the libraries of any of our physicians; and the work in question is extremely scarce amongst us. It is in seven volumes, but might be readily included, omitting his notes and references, in about three volumes of five hundred pages each. We have made considerable advance in the translation of the work, but have met as yet with little encouragement to undertake its completion."

It is believed that students (all are students) often have occasion to refer to chronological data, which few libraries contain, or if they do contain them, the data are so scattered that references are difficult and tedious.

The tables above referred to commence with Indian Period, twenty-six centuries before Hippocrates (3100 B. C.,) and end A. D., 1603, and, containing as they do the chronology of the world as well as that of medicine, are too much extended to be admitted into the *New Orleans Medical and Surgical Journal* without great retrenchment. It is therefore proposed to begin with the Hippocratic era, omitting the external or non-medical data altogether, giving a condensed medico-chronological synopsis ending about the commencement of the seventeenth century of the Christian era, an ever memorable period, in which letters, science, the mariner's compass, the microscope, printing, copper-plate engraving, the dissection of the human body, pathological anatomy, and many other means were operating energetically, by which general as well as medical knowledge was improved and extended; while governmental, social, and educational reforms were inaugurated in both insular and continental Europe; although, as yet, Harvey's discovery had not immortalized his name.—B. D.]

- B. C. 436. Hippocrates becomes celebrated (*Cyrrill. contra Julian, v. l.*)  
 428. Death of Anaxagoras.  
 425. Plague renewed at Athens.  
 404. Death of Democritus.  
 400. Lucina worshipped by the Romans.  
 396. First Lectisternium, at Rome, on account of an epidemic.  
 390. Ctesias of Cnidos.  
 384. Birth of Aristotle.  
 381. Plague at Rome.  
 377. Death of Hippocrates 2d, according to some historians.  
 374. Thessalus, Draco and Polybius, successors of Hippocrates.  
 371. Birth of Theophrastus.  
 370. Death of Hippocrates 2d, according to some historians; Dioxippus of Cos; Philistion of Locra; Petronius.  
 363. Siennesis of Cyprus; Diogenes.  
 362. Third Lectisternium at Rome.  
 360. L. Manlius Imperiosus, named dictator, drives a nail into the right side of the temple of Jupiter, to procure a cessation of the plague. This ceremony, called *clavum figere*, was anciently employed by the Volturniens, a people of Etruria, to mark the number of years. From them it passed to Rome. The nail was called *clavus annalis*.  
 354. Diocles of Carista; Eudoxus of Cnidos.  
 348. Death of Plato.  
 345. Fourth Lectisternium at Rome, on account of pestilence.  
 341. Praxagoras of Cos.  
 336. Chrysippus of Cnidos.  
 335. Aristotle quits the court of Alexander.  
 331. Callisthenes of Olynthes.



329. A dictator drives a nail into the temple of Jupiter at Rome, to procure the cessation of a strange insanity, which was regarded as the cause of the multiplication of crimes in the city.
327. Plistonicus.
324. Aristoxenes, the musician, mentions the latest philosophers among the ancient pythagoreans. (*Diogen. viii., 46.*)
323. Fifth Lectisternium at Rome, on account of a pestilence.
322. Death of Aristotle.
321. Eudemus of Rhodes.
320. Establishment of the Alexandrian library; Philotimus; Mnesistheus; Dieuchea.
318. Hippocrates IV, son of Draco.
307. Birth of Zeno of Citium; Herophilus of Chalcedonia; Premigines of Mitylene.
304. Erasistratus at the court of Seleucus; Cynethus the Homerist.
293. Plague at Rome
292. Plague at Rome; ten ambassadors are sent to Epidaurus, who bring to Rome the god Esculapius, under the figure of a serpent.
291. Plague at Rome.
290. Death of Theophrastus; Pyrrho of Eleus; Philinus of Cos.
285. Division of Medicine at Alexandria; Diodorus Cronos; Nicias of Miletus; Strato of Lampsacus; Strato of Beryta.
279. Birth of Chrysippus of Solis; Eudemus the Anatomist; Xenophon, disciple of Erasistratus; Serapion of Alexandria.
276. Mantias, disciple of Herophilus; Philoxenes; Demetrius of Apamea; Heron; Gorgias; Glaucius, the Empiric; Ammonius the Lithotomist.
274. Plague at Rome; a dictator drives a nail into the temple of Jupiter.
264. Lycon of Troy; Amyntas of Rhodes; Apollonius of Memphis; Bacchius of Tanagra.
263. Plague at Rome; a dictator drives a nail into the temple of Jupiter.
261. Death of Zeno of Citium.
251. Callianax; Perigenes.
246. Callimachus; Cydias of Mylasa.
245. Lysimachus of Cos.
242. Sostrates; Nymphodorus.
234. Birth of Cato the Censor.
230. Chrysermes, disciple of Herophilus.
224. Dreadful epidemic in the Roman army.
223. Artemidorus of Sida; Charidemus.
221. Apolophanes, disciple of Erasistratus.
219. Arrival of Archagatus at Rome.
218. Apollonius Biblas.
212. Great epidemic in the Roman army at the siege of Syracuse.
206. Death of Chrysippus of Solis.
205. Epidemic in the Roman army; sixth Lectisternium at Rome.
204. Apollonius Ther; Hermogenes of Trieca.
174. Violent plague at Rome.
158. Zopyrus.
149. Death of Cato the Censor.
146. Apollonius Mys of Citium.
143. Death of Antiochus Euthens. This prince perished under the hands of lithotomists.
138. Nicander; Cleophantes.
128. Gaius.

(To be continued in next Number.)

# THE

## Pacific Medical and Surgical Journal.

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### Selections.

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#### London Hospitals, etc.

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[The following extract from the editorial correspondence of the *Peninsular and Independent* is an animated picture of the great London Hospitals, etc. By the way, the *Peninsular and Independent* is one of the excellent Medical Journals:]

BUT it is quite time to proceed with the promised account of medical institutions and medical men, and there are many more in London claiming attention.

I should state here that it is quite impossible for me to give a full account of all the medical institutions in London — a volume, rather than a few letters, would be required for this — and I shall therefore only give such sketches as I may think will most interest you, and give most accurate notions, by proper specimens, of the whole.

There are in London some six hundred or more charitable institutions, or parent societies for charitable purposes, most of them making provisions for the care of the sick poor — over two millions of pounds sterling are annually disbursed, more than one-half of which being raised by voluntary contributions. Three of the institutions for the cure of disease are Royal Hospitals, viz: *St. Bartholomew's*, *St. Thomas'* and *Bethlehem* — the latter, commonly called *Bedlam*, is for the insane. Others, as Guy's, are supported by large endowments, while others still are entirely dependent upon voluntary subscriptions and contributions.

*St. Bartholomew's* Hospital, in Smithfield, not far from the General Post-Office, and *St. Paul's* Church, is the earliest institution of the kind in London,

and is now one of the largest, having accommodations for about 600 patients within its wards, and relieving vast numbers as out patients. In all, some 70,000 to 80,000 patients are annually prescribed for, and provided with medicine, in connection with the institution. It is a general hospital, admitting every form of disease and accident, medical and surgical. The in-patients are visited by the physicians and surgeons, and the out-patients by the assistant physicians and assistant surgeons. The medical school attached to this hospital is the largest in London, and a place as teacher in it is consequently considered as most desirable — fees in all the London schools depending upon the number of students. As, however, the teachers are not the licensers to practice, or the conferrers of degrees, there is not the opportunity to lower the standard of requirements for the purpose of securing members.

The men I saw most of at St. Bartholomew's were Dr. West, Professor of Obstetrics and Diseases of Women and Children — author of various works on diseases of children and females — Drs. Baily, Kirke and Marvin, physicians, and Messrs. Lawrence, Skey, Stanley and Paget, surgeons. Dr. West is a man about medium height and size, in the neighborhood of fifty years, and is quite affable and attentive to strangers. He is an accurate, direct, and clear lecturer; does not repeat or render emphatic important points; speaks rather rapidly and without notes, keeping his eyes upon the floor or table, and is decidedly English in his pronunciation and manner. Notwithstanding, this is, I believe, the largest school in the metropolis, the numbers attending his regular lectures on Midwifery were a little less than forty, as counted several times in his lecture room. The ability of Dr. West, and the classical character of his writings, are well known. But notwithstanding all this, and his position at St. Bartholomew's and the Hospital for Children, his success in obtaining private practice has not been great. He has a limited number of beds in the hospital for the diseases of women, and prescribes for a large number of out patients, all of whom are females effected with diseases peculiar to their sex. So far as I observed, his examinations of his patients were very fairly careful, notwithstanding the large numbers presented to him, and his prescriptions, while not remarkable, appeared judicious. The number of fibrous tumors of the uterus, which I saw among his out-patients, surprised me — four cases of large tumors of that organ presenting themselves during one morning. Most of them had been a considerable time under his observation, and the degrees of suffering in the different cases were very various — not always in proportion to the size of the tumor or the continuance of the disease. Much seemed to depend upon the susceptibility and power of endurance of the patient. Saw several cases of cancer of the Uterus, Leucorrhœa, Prolapsus, Procidentia, &c. One case was presented, of extra-Uterine pregnancy. It had continued four years, the patient being at the time pretty comfortable, having, however, occasional attacks of pain, especially after severe exercise. The woman was about attending to her family, and the tumefaction was gradually diminishing.

Dr. West informed me he had seen five cases — most of them proving fatal at periods varying from a few months to a few years. This had already continued longer than any of the rest, and was likely to continue for considerable time to come. I encouraged the poor woman to hope for the best, mentioning the case published some years ago in the *Peninsular Journal*, taken from one of our cotemporaries, where a patient carried a fœtus for about fifty years without much suffering; she dying at an advanced period in life, the fœtus was found completely ossified, and is now in the Museum of the Medical college of Albany.

Dr. West made various inquiries and observations respecting some of our writers on diseases of women, particularly about Dr. Miller, of Louisville, Ky., who had reviewed somewhat severely his Croonian lectures on diseases

of the Os Uteri, and Doctors Bedford and Meigs. He spoke favorably of the abilities of all these gentlemen, though he thought the printing of so much conversation with patients in the works of the two latter, very strange.

He spoke of our countryman, Dr. J. Marion Sims, in strong terms of commendation, regarding the use of the Silver Suture as introduced by him, and his full method of operation for visico-vaginal fistules as among the most important triumphs of modern surgery. Not only Dr. West, but all others with whom I met, well informed on the subject, spoke in very warm terms of the improvements by Dr. Sims — and I may mention here, that in my whole tour, I have seen no method of examination — no system of manipulation in diseases of this kind, that will compare with his. Those whom I have seen attempting to adopt his proceedings, have in no instance equalled his dexterity. I think it must be acknowledged, that at this moment, Dr. Sims stands unrivaled in skill and success in the treatment of this most distressing class of accidents. This I feel bound to say after seeing examinations of these parts and operations in Paris, Edinburgh and Dublin, upon them, as well as in London; and while impelled by a sense of justice, I am proud, as an American, to be able to bear testimony to this effect. That others in this country and in Europe may, with equal opportunities, acquire all of Dr. Sims' skill, and attain to all his success, is by no means denied; — but as yet no one has had the same opportunity, or given the same attention to the subject.

I was very glad to meet with Dr. West, and see so much of him, and especially so as I had so long admired his excellent work on the diseases of children. What I saw of him, confirmed my opinion of his talent, and left a favorable impression of his character. I must say, however, that in a lecture upon the signs of pregnancy, I was surprised to hear him state the old views respecting what has been called, the "placental murmur," considering it as being produced by the blood passing through that organ, and as an evidence of pregnancy, without stating the reservations which more recent investigations have induced others to make.

I had but one interview with Dr. Bailey, but it was of two hours or more duration, among his out-patients at the hospital, and left an exceedingly favorable impression of the man on my mind. He is a man of some thirty-five or forty, of about medium size, with a very intelligent and pleasing countenance, and a finely developed brain. With his patients he was kind, sensible, patient, pains-taking and correct, and towards strangers and students, affable and communicative, giving to the four or five young men who attended him excellent practical instruction, considering the rapid manner in which the very large number of patients compelled him to proceed. I was glad to learn that his good qualities, which I felt sure he possessed, were appreciated — that he had recently been appointed Physician Extraordinary to the Queen, over many older men, and that he was enjoying a good private practice.

Dr. Martin was a man still younger, of very superior physical development, of good mind and agreeable manners. He is a resident upon the grounds of the hospital, is ready to be called upon for the in-patients, in emergencies, and has charge of very large numbers of out-patients. He informed me that on the days for out-patients to visit him, he often examined and prescribed for two hundred at a single sitting of a morning. He had two or three assistants who aided him more or less in examining the cases and prescribing for the more trivial complaints; but he was responsible for the whole, and could neither do himself or his patients justice. There come to him almost every variety of mild affections, beside many of a grave character, particularly phthisis. He seemed to apprehend this disease in many who presented themselves, and often intimated its existence before a careful examination was made. There was nothing unusual in his treatment. He, however, often prescribed doses where it seemed to me hygienic regulations were alone required.

Dr. Kirke, the author of the compendium on Physiology, I saw among his out-patients. He is a small, spare, acute man, rather rapid in his movements, and still young enough to advance in his profession. Although I observed nothing in his practice demanding special record, what I saw of him left a favorable impression of his abilities and character.

Of the venerable surgeon, Mr. Lawrence, the author of the work on the Eye, and various other productions, metaphysical and professional, you have all heard. He is a fine, genial-looking old man, with an excellent development of brain and body well preserved. His spirits appear to be in their bloom, as he joked and laughed more than any of the distinguished men with whom I met in London; but his intellect is said to have passed its prime some time since. He is regarded as committing the error which other aged men have often done, of holding on to a position longer than is desirable or proper—thus marring a reputation well earned by a long course of faithful and honorable labor. He still retains the chair of didactic surgery in the school, though he has outlived his efficiency as a teacher. This is as much to be regretted on his own account as that of the pupils, and the interests of the school to which he is attached. When I saw him in his wards, but very few students followed him, and their quiet but significant exchange of glances, by no means indicated that confidence in his sayings and doings which should be extended to one in so important a position. I heard many express themselves on the subject, all regretting his continuing in his professorship,—the only excuse being offered for it was, that he had an expensive family, and needed the income. I had no opportunity of hearing him lecture, and judging of his present capability for myself, but the common expression was as I have stated. It was not so particularly used that his intellect had far decayed, but that he was antiquated in his matter, his methods, and spirit of teaching—not being up to the demands of the present day. All this I felt the more to regret, as I have a high appreciation of Mr. Lawrence's moral and social qualities, and of his former professional labors. But men must grow old, and their confidence in themselves is not usually the one first to fail.

Mr. L. was very affable, showing me all his cases of interest, and speaking of them freely. I saw in one of his wards a case of chronic synovitis of the knee, with thickening of the fibrous structures about. The patient was a young woman from the country, of a better class than are usually found in hospitals, of fair constitution, not scrofulous, and the bones were unaffected—but the disease had continued for five years, though without supuration, was somewhat painful, and so tender as to prevent the patient from walking. Mr. Stanley was called in consultation to determine the question of amputation of the thigh for the purpose of relieving the sufferer of a useless and troublesome member. Much treatment had been suffered without any beneficial effects. Mr. Stanley said, and repeated, that he knew of no treatment that did any good in such cases—none whatever; but gave the opinion that the case was hardly bad enough to justify an amputation. The operation was, however, afterwards performed, and a few days subsequently I saw her in a state of furious delirium, alternating with spasms, and in a most precarious condition. There was, indeed, a strong probability of a fatal termination, but this being my last visit to the hospital, I did not learn the result. The patient, previous to the operation, was in a very comfortable condition of health, though lame, and it seemed to me so severe an operation in an hospital where fatal results are so likely to follow, was not justifiable.

Mr. Stanley, the author of the excellent work on the Bones, is a short, rather stout man, fifty or upwards, with gray hair, thick pouting underlip, and is rather abrupt and gruff in his manners. He is a prompt, vigorous, decided man—a cool operator, and, I have no doubt, a good surgeon.

Mr. Skey is also rather a stout man, somewhat taller than Mr. Stanley, and a few years his senior. He is a clear-headed, straight-forward, energetic

man, an excellent operator, and in every respect a good surgeon. His remarks at the bed-side were always sensible and to the point, and he was followed by a crowd of students through his wards.

Mr. Paget is a much younger man than either of the other surgeons mentioned, is slightly above the medium height, not stout, and appears remarkably active and energetic. He has resigned his professorship in the school, his large private practice rendering it no object for him to retain it, but he continues ardently devoted to the science of his profession, and is thought to be destined to rise much above even his present very high position. Those who are familiar with his admirable work on Surgical Pathology, have some idea of his abilities as a thinker and writer on scientific subjects; and he is thought to be equally clever in practice. He retains his position as one of the surgeons of the hospital, and while his retiring from the duties of a didactic teacher is a matter of much regret to the friends of the school, it will give him more time for pursuing his scientific investigations, and his private practice—objects which he seems to have more at heart. All agree that his future promises will be even more brilliant than his past.

Of the other physicians and surgeons connected with St. Bartholomew's, there are several of eminence and promise, but I saw too little of them to have received a distinct impression. The institution itself, as already stated, is the largest and most ancient in London, and one about which you will be most interested, perhaps, to know. The statistics of the amount of medicines used, show that dosing is by no means given over. It is stated that 2,000 pounds weight of castor oil, 1,000 pounds of senna, 27 cwt. of salts, 12 tons of linseed meal, are among the annual items. The number of surgical cases may be judged by the fact that 5,000 yards of calico are used for bandages every year. They seem to have confidence in sarsaparilla, as more than half a hundred weight is used every week, and that they are not altogether insensible to the good effects of blood-letting, is shown by the fact that within a single year, not long since, 29,700 leeches were bought for the use of the establishment.

St. Bartholomew's has many associations connected with it. Wm. Harvey, the discoverer of the Circulation of the Blood, was physician to this hospital, doing duty for thirty-four years, and establishing rules which governed his successors for nearly a century. A little more than one hundred years ago, Edward Nourse delivered the first course of lectures on the subject of Anatomy in the institution, and a few years later, Percival Pott commenced his courses on Surgery, and about the same time, Drs. Wm. and David Pitcairn commenced courses on Medicine. In 1787, Mr. Abernethy commenced his career there. From these beginnings the school was built up—students were attracted, and museums and other appliances were provided. To the funds of the hospital Dr. Radcliff gave £500 a year forever towards "Mending the Diet," and £100 forever, for the purchase of linen. The income of the hospital is between £30,000 or £40,000, or near \$200,000 a year. But I have given quite as much space to this institution, great and venerable as it is, as can be afforded. I will close this letter, already becoming long, by a brief mention of the great Eye Infirmary at Moorfield, towards the Eastern part of London. This is said to be the largest establishment of the kind in the world. There are four responsible surgeons in attendance, with several assistants and patients, are met daily—one-half of the staff being in attendance one day and the other the next—alternating. I saw most of Messrs. Dixon and Hutchinson—the former author of an excellent practical handbook on the Eye, and the latter, the editor of the *Medical Times and Gazette*. The other two are Messrs. Crickett and Bowman; the latter of whom I referred to in a former letter. Mr. Crickett is regarded as an able man, and appears well among his patients.

The number of cases returned in the hospital for the establishment, in the

course of a year, is almost fabulous, affording the largest opportunity for statistics and comparisons of different modes and treatment. The ophthalmoscope is constantly brought into requisition in diagnosis—a solution of the sulphate of Atropine, being dropped into the eye instead of the old plan of painting the extract upon the skin about the organ.

They depend here much upon mercury in Syphilitic Iritis, treating very lightly the assertions of some, that it may be as well treated without it.

In Ulcers of the conjunctiva over the cornea, accompanied with vascularity, &c., they relied entirely on general treatment—applying only placebos to the part to prevent other things being used. Small setons in the temples, and blisters, were sometimes used as means of counter-irritation, but no caustic or irritating applications were made to the ulcer.

Inflammation of the cornea with a ground glass appearance—a general haze, indicated, they said, a *hereditary* Syphilitic taint. The teeth would be found in nearly all of such cases peg-shaped—contracted at the extremity with a concavity or notch on the surface. These cases of ground-glass haziness will get well in time of themselves—are, according to Mr. Crickett, sure to recover, but some months will elapse.

I saw under Mr. Dixon's care a case of spontaneous cure of cataract—the opaque lens having fallen below and out of the axis of vision. Mr. D. said he had seen several such cases. It would seem that there are few morbid conditions entirely beyond the curative powers of nature.

All the surgeons at this institution are able and attentive, and from the vast numbers of patients, excellent opportunities are afforded for studying this interesting class of diseases.

Yours truly,

A. B. P.

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From the Cincinnati Lancet and Observer.

### Upon the Use of Opium in certain conditions of the Parturient Process.\*

BY C. A. LOGAN, M. D., LEAVENWORTH CITY, KANSAS.

FOREMOST amongst the many difficulties that the accoucher is obliged to encounter in his daily experiences stand the derangements of the propulsive and expulsive powers of the uterus itself. Distortions of the pelvis and malpresentations of the child, in their various forms, constitute, it is true, obstacles which occasionally render the process of parturition one of serious and portentous import; yet these, in a very large majority of cases, are overcome by a scientific knowledge of the relations and adaptations of the fetus to the pelvic cavity, with safety to both mother and child. But the motor forces, which launch the young being into the world, are resident within the maternal economy, and consequently, being less under our control, frequently become the most vexatious and unmanageable impediment to a safe and speedy delivery. Our advance in this department of labor has in no wise been commensurate with that of the mechanism of the process, and consequently when the world was presented with a remedy that was thought to possess a controlling influence over the uterine fibre, it was greedily seized upon and

\*Read before the Leavenworth Medical and Surgical Association.

applied indiscriminately to every case in which the uterine forces were inefficient; and with what result thousands of childless mothers can tell. That ergot is a powerful agent, for good or evil, no one will deny; but that it is utterly inadmissible in a very great number of cases of uterine inefficiency every experienced practitioner will bear testimony.

My object in writing this paper is to narrate briefly a form of treatment I have been adopting for the last few years, in a variety of tedious labor with which probably we are all familiar, which has been attended with very great success in my hands.

We are summoned, hastily, to see our patient, whom we find has been in labor, perhaps, some hours, with the most excruciating pains, and, upon inquiry, we find that the pains are confined almost wholly to the back; there is little or no effort at "bearing down," but almost a continual outcry, for the pains scarcely leave at all. A vaginal examination reveals to us the fact, that notwithstanding the severity of the pains, the membranes scarcely become tense; there is, in fact, no propulsive action exerted upon the ovum which occasions it to advance one inch. The parts may be soft and perfectly natural; the os may be dilated to any extent compatible with the integrity of the membranes; and when dilated we generally find that the pains came on naturally enough at first, but after an uncertain period lost their expulsive character and assumed that which we are now considering.

These pains are of the most exhausting nature to the woman, and frequently, in her anguish, she will cry out, "Oh, Doctor! I shall die; I know I shall!" And, upon my word, in my early experiences, I have really thought she would. Now, this species of pain, although frequently met with in females of a robust and plethoric habit, is much more likely to happen to those of a delicate and nervous conformation.

I have remarked that this irregular kind of pain may come on at any time prior to the expulsion of the child, and not, as asserted by Madame Boivin, only before the head has passed the superior strait. I have known it occur after the head has escaped from the uterus. Here, however, the pain and impediment to delivery is produced by a somewhat different state of things from that which occurs before the rupture of the membranes. In the former case, the neck being subjected no longer to the mechanical dilatation of the child's head by the same species of irregular contraction as occurs in the last form, becomes constricted around the neck of the child, thus preventing the shoulders from passing even, were the *vis a tergo* of a natural character.

This kind of pain has been commented upon by more than one observer. Dr. Dewees, in his excellent treatise on midwifery, in speaking of its cause, remarks, that "it has been attributed by some to the stretching of the posterior ligaments of the uterus; by others, to the violent contraction of the muscles of the posterior part of the trunk. We are of the opinion it is caused by some irregular action of the uterus itself."

In contemplating the dynamical forces of parturition, it is not necessary for our present purpose to go into an investigation of their final and efficient cause: whether it is due to the inherent contractility of the uterus, as maintained by many, or as the result of a "reflex" action of the spinal cord, as elucidated by Dr. Tyler Smith, concerns us at present. We have but to examine the structure of the uterus, to find it composed of muscular fibres disposed in such a way that their united and harmonious action has the effect of diminishing its cavity in all directions. In order, then, that the action of the uterus should be efficiently exerted upon its contents, it is necessary that an equable and steady balance must exist between the longitudinal and circular fibres (I do not refer to the semi-circular fibres disposed around the cervix; and if, through a perverted nervous action, or an exhausted condition of the muscular fibre, or any other cause, the unity of action should be destroyed between the two sets of fibres, it is evident that the object will be defeated



so long as this disproportion continues. Now, this is what I conceive to take place in the kind of cases I have referred to. The uterus, being muscular in its character, must be subject to the same laws that govern the muscular tissue generally; and hence we find that in females of a delicate habit, in whom the nervous energy is deficient or unequal, this state of things is apt to exist; or in those in whom from any cause—as a large head, a large quantity of liquor amnii, etc.,—the dilatation has been tedious, and the muscular structure has been subjected to long continued and violent action, this spasmodic condition is apt to obtain; also at the commencement of labor, and especially in primiparous cases, before the simultaneousness of the movement is developed, it presents itself; and, finally, it is seen frequently in those women of a full and plethoric habit, in whom an undue supply of blood predisposes to a morbid irritability and contractility of the muscular tissue generally. In the latter cases, the lancet freely applied constitutes a weapon of never failing efficacy. It is in the first mentioned conditions that I wish to present *opium* as a remedy of untold potency for arresting the irregular action of the uterus, and restoring the pains, paradoxical as it may seem, to their original and proper condition; and this it does by simply equalizing the perverted nervous action, allowing, nay, compelling a uniformity of action in the uterine fibres. Nor does it have the effect, in a large majority of cases, as might be supposed, of putting an end to all pain: on the contrary, I have seen women shrieking almost incessantly with this form of pain in the back without any expulsive action of the uterus, under the repeated administration of an opiate gradually become calm, have a decided interval established between the pains, and themselves gradually merged into powerfully expulsive efforts, which would terminate more rapidly than I dared hope in the birth of the child. I have, at times, been astonished at the magical change, and never more than the first time I had occasion to prescribe the remedy. The woman was in the condition before described; an examination showed the os to be dilated to about double the size of a dollar, but there was no advance of the child whatever; and thinking to quiet the pains, in order that the uterus might obtain a period of rest, I prescribed an opiate, to be given every twenty or thirty minutes until the *pains were stopped*, and, promising to call again, I took my leave. I had not been gone long, however, before a messenger requested my immediate attendance. My surprise may be imagined, upon arriving, to find the child born. I was informed that she had taken two doses of the opium, and that after taking the first the old pains began to leave and become bearing down; and that after taking the second they became very violent; and in three-quarters of an hour after the first dose the child was born. An old lady, who had been her attendant, confidentially said to me, "Doctor, when you give such *powerful stuff* to bring it on, you ought to stay by." I took the hint, and have used it to advantage ever since.

Ergot, it will be perceived, in this case would have been inadmissible at the time of her taking the opium, for I believe it is an established rule never to give ergot unless the os is not only dilatable, but fully dilated. Nor do I believe that bleeding, that mighty weapon so heroically used by some in the parturient condition, would have been attended with the success of the opium; and I am sure the patient was far better off, and convalesced much more speedily, than had a profuse bleeding been practiced. Say what we will, there can be no doubt that the excessive loss of blood to which many women are subjected has been a most fruitful source of the diseases and mortality incident to the puerperal state. No man can estimate its efficiency more highly than myself, yet, like ergot, it is not a specific for *all* the ills of parturition; and it is only when based upon a rational consideration of the conditions present that its advantages, stripped of its deleteriousness, may be realized. I have seen women rise from child-bed so blanched, so totally bloodless, as more nearly to resemble an emaciated wax figure than anything else.

**I mention these things to illustrate the unpardonable abuse of remedies that so many of us are liable to be guilty of.**

In this connection, I may be permitted to extract one of the many cases from the pages of my note book: "September 13, 1856. Mrs. John W—, taken to bed with her fourth child. Has always had an excessive, lingering labor. Was taken with pain early in the morning, but being aware of the length of time she always suffered, did not send for me until midnight. Arrived, I found her in intense agony, complaining bitterly of her back, while the pain never left her. Pulse weak, skin cool, no vomiting. An examination revealed the os largely dilated, but there was little or no advance of the head during the pains. Parts soft and yielding. She tells me that this has been the character of her previous labors, and that always before she had been largely bled, but which seemed to do her no good. I gave her thirty drops of tinctura opii every twenty or thirty minutes, and soon the pains began to leave the back, and, becoming violently expulsive, the child was born in one hour and a quarter. She declares it to be the 'quickest' time she ever had. Convalescence rapid."

This case is illustrative not only of the efficiency of opium in certain cases, but also of the misapplication of blood-letting in her previous labors. Even in cases where the requisite conditions for the administration of ergot is present, I prefer the opium, if it is adapted to the case: first, because I regard it as eminently more certain; and second, because I do not believe it is accompanied with any of the perils of ergot. I speak now of its judicious and proper administration: all remedies are liable to abuse, as I have before mentioned.

I generally use the sulphate of morphia, in a single aqueous or aromatic solution, in doses varying from the one-eighth, one-fourth, to even one-half of a grain, according to the circumstances, repeated every twenty or thirty minutes until the pains either change their character or cease altogether, which latter condition is greatly more favorable than the distressing pains, which do not advance the labor at all, but on the contrary, exhaust and prostrate the patient to the last degree. Besides, after a period of rest, the uterus generally is aroused to a healthy and vigorous action, which soon completes the labor. I have never seen any untoward symptom arise after its administration that could fairly be attributed to its use; and, when given in the gradual and cautious manner I have indicated, not even an unusual amount of drowsiness to supervene. Neither have I seen a case of hemorrhage follow it.

The frequent and indiscriminate use of ergot by injudicious practitioners has come to be a crying evil. It is not that we do not possess the remedies to combat these cases of lingering labor dependent upon a deficiency of uterine power, that we are obliged to wait for hour after hour with vexatious impatience, exhausting not only the woman but ourselves; but it is rather because we do not inquire strictly into the pathological conditions present, and apply our remedies knowingly, but give ergot, perhaps, when we ought to bleed; bleed when we ought to give ergot; or do both when a few doses of opium would produce a happy termination for all parties.

Specifics in labor, like specifics in disease, are the consequence of ignorance, and attended with the same disastrous results. If one-half the elaborate investigation had been applied to the study of the motor forces of parturition, normally and abnormally considered, together with their dependencies generally, that has been bestowed upon the elucidation of their primary exciting cause, the long catalogue of lingering labors would be very materially diminished, and a real benefit conferred upon suffering humanity.

From the Atlanta Medical and Surgical Journal.

### Remarks upon the therapeutical action of "Aconite."

BY JNO. R. CUSHING, M.D., OF SOUTH BUTLER, ALABAMA.

UNTIL I removed to Alabama, some three years since, I was altogether unacquainted with the remedial powers of the "Aconitum Napellus." With the profession in Georgia, "Veratrum Viride" was the great antiphlogistic, and I came with all the prejudices possible, in its favor. I had not only used it with success in many grave cases, but I fear, accredited to it, merits it did not possess. The practitioners in Montgomery, have long since laid it aside, and have been using for several years past, the "Sat. Tinct. of Aconitum." It being a new remedy to me, I studied its powers and action closely, and may say, was rather skeptical for a time—scarcely crediting my own observations. Accident, by some means, threw the pamphlet of the late Dr. Ames, into my hands, on the treatment of Pneumonia with the Aconite—the novelty of the treatment, the high professional character of the doctor, and above all, the statistical result of cases treated, induced me to adopt this mode, and now after two years experience, I can say with satisfaction, I have met with almost uniform success, and I endorse his process as the best I have ever used in the treatment of this disease.

Now, Messrs. Editors, I am no believer in specifics, or pet prescriptions, but to confess the truth I have to acknowledge that the Aconite comes nearer to my notion of being a *specific* than any other agent I have ever used, and with the exception of Mercury, it is my "dernier resort" in every disease in which I come in contact with, when other remedies fail, and many times it supercedes Mercury in its controlling influence over diseased action, where the mercurial is contra-indicated, or the system will not bear it.

The great embarrassment, in the use of "Veratrum" with me, has been, that in many cases, idiosyncrasy forbids its use, and especially in female cases. I have met with mortifying failures, even one drop of the Veratrum producing such irritation as to forbid its use. We all know that "Veratrum" owes its curative effects to arterial sedation, acting upon the system as a nauseant, reducing the irritability of the pulse after the same manner of Tart. Emt. and not unfrequently extending its effects upon the bowels, producing irritation, bloody stools, etc. Now in regard to the "Aconite" I believe it has a direct curative action through its influence upon the nervous system, independent of its nauseating properties, in small doses, acts as a nervous sedative, also with a direct tendency to relax the tension of the pulse, and in doses large enough to reduce its frequency, its action is pretty much the same as the "Veratrum Viride" with the exception that it is not so often accompanied with intestinal disturbance as that drug, nor do you seldom meet with cases where idiosyncrasy forbids its use. I have given it often to children, and seldom meet with a case of the prostration and irritation which so often follows the administration of the "Hellebore," now this is a great advantage of the Aconite, if otherwise it only acted in the same manner as the "Veratrum" and another important item is, that in the use of the Aconite, when arterial excitement has been reduced, it is much more permanent than the reduction produced by the "Veratrum," the doses being given in an inverse ratio, and less frequently, owing, no doubt, to its action upon the brain and spinal marrow, combatting directly the diseased state of the nervous system,

as the prime cause of disease, or producing a modifying effect ulteriorly upon the heart and arteries, after excitement has once been reduced. and even in subsequent reaction, small doses and repeated less frequently, being all that is necessary in keeping the diseased action, under control, producing not only quiescence in the arterial system, but also in the nervous system.

Dr. Ames\* very justly remarks, "that Aconite takes precedence of other remedies that combine properties of a sedative to the heart's action, and of a stimulant to the contractile force of the capillaries; these properties make them, as they have proved to be in practice, especially applicable in all cases of acute disease—applicable in all cases whether acute or chronic, in which the vital powers and force of the heart's action are equal to or above the standard of health. In this class, may be placed, in the order of what I conceive to be, their relative value in acute inflammatory affections generally.

\* \* \* \* \* Besides its greater efficiency, its application does not require to be limited by any peculiarities in its operation, nor by the character of the organ affected. It is proper to add, in connection with the last remark, that my experience in its use, is limited to inflammation of the brain and its meninges, of the throat, of the lungs and pleura, peritoneum, intestinal mucous membrane, whether attended with dysentery or diarrhœa, rheumatism, chronic or acute, erysipelas, acute corneitis and conjunctivitis.

Dr. Ames' formula in the treatment, is the following, on visiting a patient of adult age, for the first time, laboring under pneumonia, in the first or second stage, pleuro pneumonia, or pneumo bronchitis :

- R. Tinct. aconitum, nap. (sat.), gtt. xii.  
Quinine, sulph. vel. ferro cyan, grs. xxxvi.  
Morph. sulph. gr. i.  
M. ft. pil., xii.
- R. Sol. phosphorus, gtt. xvi.  
Water, oz. iv. *M.*

Of the first, two pills are directed to be given every third or fourth hour, usually every fourth, each dose being preceded one or two hours, by a teaspoonful of the phosphorus mixture; if an anodyne be required, in addition to that contained in the pills, a quarter of a grain of morphine may be given at bed time; if there be much pain, not yielding permanently to anodynes, a large blister should be applied over the seat of the disease,

A few words, on making and testing the tincture, may not be amiss in this place, and the formula suggested by Dr. Ames, I consider as good as any; you will discover his process is pretty much the same as that given by Dr. Fleming of London. R. of the fresh bruised root one pound, alcohol enough to make one pint of the Tincture. But owing to the different inequalities of the root which we find in our Drug Stores, it should always be tested before used, Dr. Ames "says that the best tincture diluted in proportion to an ounce of water to sixteen drops, taken into the mouth in small quantities, produces a burning in the tongue and lips, with a feeling of tingling and numbness, and a loss of taste, the sensation lasting from two to eight hours "

With myself, there is hardly any disease, in which I do not use this preparation; if there be an exception, it is Typhoid fever. I have never derived much benefit from it in this disease, nor can I explain the reason why; a disease which has baffled our soundest pathologists, and in the treatment of which, the most learned and sagacious of the profession differ, there is no doubt, that acting as a contra stimulant, it depresses too much in this disease where there exists from the beginning a proneness to prostration, and giving way of the vital powers.

\*See New Orleans Medical Journal, January, 1854.

But in pneumonia, bronchitis, and all other inflammatory diseases, it supercedes as I have already remarked everything else I ever used, in fact in any disease connected with symptomatic fever, I always find it beneficial, sometimes directed in the beginning of acute attacks, and indirectly in combination with other remedies, in affections of a more protracted nature.

In the treatment of Pneumonia, I generally use it in connection with Phosphorus as suggested by Dr. Ames in the above recipes, there is no doubt but that Phosphorus is an important adjuvant, acting as an expectorant and contra-stimulant of the greatest power. Where blisters have been used to subdue pain, nothing gives more ease than the constant application of large emollient poultices to the blistered surfaces for four or five days. As a matter of course the great alkaloid quinine should be given all the time in connection with the remedies. Purgatives, (and especially mercurials) I consider of doubtful utility, unless there be what we call a bilious complication, if such be the case, as a matter of course a mercurial is necessary, but purgation should be avoided in every instance unless connected with this bilious tendency and then a Blue Pill and Dovers Powder occasionally, is all that is indicated. Where the liver becomes implicated with inflammation of the base of the right lung, with pain and tenderness on pressure, with vomiting of bilious matter, a few cups, and a blister will generally prove effectual. The acridness of the alvine discharges, and colicky pains, may be quieted by a few doses of soda and Ess. Pp. menth :

In Pneumonia in this locality, the thing to avoid is that typhoid tendency, the disease is so apt to assume in its second stage, so frequently brought about by the indiscriminate use of purgatives, the course to pursue, is prescribe them altogether, and husband the flagging powers with the remedies already alluded to. If there be foul tongue, delirium, subsultus tendinum, give aconite, if irritability of the stomach, correct portal congestion, and give aconite, use no hurry; if the system tolerates it, use the aconite in the above symptoms as an excitant, not as a depressant; give your quinine and keep your blisters open by poultices, administer your morphine to allay restlessness and quiet nervous agitation, this is the usual course I pursue; there may be many modifications which common sagacity will point out, where deviations may be made. The important landmarks to be kept in view, are to avoid purgatives, use them as seldom as possible; husband the strength and allay irritability; the main idea is, use as little depletion as possible by either the lancet or cathartics.

I have never had much confidence in expectorants in the treatment of the active stages of pulmonary diseases, but when they are used with Phosphorus, there is no doubt but that they are of great efficacy. In regard to phosphorus there is now but little discrepancy of opinion relative to the peculiar influence it exercises over bronchial and other pulmonary diseases, how or in what manner beyond that of a stimulant is hypothetical with me, I only know that it is a master remedy, and when used with the Aconite, an excellent adjuvant in the treatment of Pneumonia.

A few more words on the action of Aconite and I am done. My dose is generally from two to three drops every three or four hours, but the pulse is the great guide of action. When used as an arterial sedative, it is a powerful remedy and sometimes produces alarming effects, and therefore should never be put in the hands of careless nurses; you cannot be too guarded in your directions, for a drop or two, beyond the ordinary dose (though not fatal) sometimes develops symptoms which is not pleasant to behold. It frequently is desirable to give enough or to repeat the dose often enough to induce some nausea or slight vomiting, particularly in the first stage of Pneumonia, and it is always safest not to go farther as a general maxim.

There is a point beyond which we cannot go with safety; the symptoms that warn us to stop, are a peculiar dryness and coldness in the throat, a

difficulty in swallowing, etc., and generally complained of by the patient when felt, this you may call "aconitism," and are symptoms that must bid us pause; a few drops beyond this you develop the poisonous action of the drug, which seen once, is sufficient to teach you the caution afterwards, so necessary, in its administration; you will generally find when this coldness and dryness of the throat is complained of, an amelioration in the activity of the disease.

As an expectorant in bronchitis, colds, etc., you can use the following, with great advantage:

R. Tinct. aconite, gtt., xxvi.  
Tinct. phosphorus, gtt., xvi.  
Syr. Tolu., oz. ij. *M.*

Teaspoonful every three hours.

If I had not already run the essay to a tedious prolixity, I might say something in regard to phosphorus, but being in this place irrelevant, I leave it to better hands, and abler pens, to discuss its great merits; however, I may say, I use the anhydrous alcoholic solution.

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From the Philadelphia Medical and Surgical Reporter.

### **Belladonna in Suppressing the Mammary Secretion.**

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BY R. V. WILSON, M. D., OF CLEARFIELD, PA.

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THE *American Journal of the Medical Sciences*, for July, 1858, contains a report of a case by Geo. McC. Miller, M.D., of Brandywine, Del., in which "with apparent effect," he employed locally, a solution of the extract of belladonna for the suppression and dispersion of the lacteal secretion; and the same journal for July, 1859, contains another case by the same writer, tending to establish his favorable estimate of its value in the treatment of the inflamed breast of the parturient woman.

I am induced to report the following case as strikingly confirmatory of the value of the proposed remedy, and should the experience of the profession establish the opinion I now entertain of its value, much pain will be mitigated, and many an interesting patient escape a disgusting series of poultices and fomentations, as well as the distress and exhaustion of protracted and difficult mammary suppuration.

Mrs. B., aged 43 years, the mother of twelve children, in her first confinement suffered from repeated abscesses of the breast, one of which penetrated the substance of the nipple, by which the mamillary tubes were completely obliterated.

Since then the only outlet for the milk has been by the painful channel of an abscess, and efforts to suppress the secretion of the diseased gland, even when successful, resulted in the arrest of it in both breasts.

Repeatedly, as often as in one half of her confinements, have abscesses formed, and more favorable terminations were purchased by weeks of discomfort and suffering.

In December last, I was consulted with regard to her expected confinement, when she stated her apprehensions concerning her breast, compared with which the prospective painful and lingering labor, as past experience indicated, was regarded as of secondary importance.

A few days later she went into labor. On the third day the gland swelled,

moderately, when I directed the application of a solution of extract of belladonna (oz. ss to f oz. i), by means of a camel-hair pencil to the areola of the mamma every fourth hour. On the fourth and fifth days the breast was quite tense and shining, but, under the application, in less than a week, the gland re-acquired its normal size and condition. No auxiliary treatment was adopted.

The function of the other breast was not interrupted. It supplied then and since, for the most part, the necessary nourishment for the child.

Further experience will reject or confirm the claims of the application to the confidence of the profession. In this case it was certainly most successful and satisfactory.

**CLASSIFICATION OF DISEASES OF THE NEW YORK EYE INFIRMARY.** By F. J. Bumstead, M.D.—Dr. B. (*N. Y. Jour. of Med.*) reports four thousand two hundred and nine cases of diseases of the eye and ear, treated at the infirmary during the year 1858.

Accompanying his classification, is their method of treatment. We observe nothing new, with the exception of the use of tannic acid and glycerin in granular lids, claimed as having been first introduced by C. R. Agnew, M.D., of the infirmary. Proportion a drachm of the former to an ounce of the latter.

Dr. A. M. Slocum, Chief Resident Physician of the Northern Dispensary of this city, late of Cincinnati, informs us of having first used tannic acid in water, for the same disease, in 1851. He has since been applying it in cases under his charge, and reports favorably.

Dr. B. gives two formulas of the Eye Infirmary, which are probably used more than any others, where a mercurial and tonic are required, viz :

R. Hydrarg. cum cretæa, gr. ij.  
Quinæ sulph., gr. i.

M. ft. pulv.

R. Hydrarg. cum cretæa, gr. ij.  
Quinæ sulphatis, gr. i.  
Pulv. ipecac et opii, gr. iv.

M. ft. pulv.

In cases of iritis these are invaluable. Dr. B. finds the ophthalmoscope indispensable. "The slightest shade of lenticular or capsular opacity can be detected long before the cataract is visible to the naked eye." They find it especially reliable in amaurotic cases, to form of progonais.

**LONGEVITY OF PEERS.**—The stoical doctrine that care and hardships have a tendency to lengthen human existence, while luxury shortens it, has long since been contradicted; and it has been shown pretty conclusively that the good things of this life are highly conducive to health and longevity. We were struck with this lately on reading the ages of those British Peers who have died during the last few months. No persons are more addicted to good living, late hours, excitement and enjoyment than they, and yet out of twenty who have died within the year, there are sixteen whose united ages amount to no less than 1229 years, giving an average of 76 years and a half to each. This list is as follows:—The Earl of Aylesford, aged 72; Lord Northwick, 81; the Earl of Ripon, 76; the Marquis of Bristol, 86; the Duke of Leeds, 60; the Earl of Moray, 63; the Earl of Tankeville, 83; Earl Cathcart, 76; the Earl of Harborough, 62; the Earl of Jersey, 86; the Earl of Westmoreland, 75; and Earl Waldegrave, 71.—*St. Joseph Journal of Med. and Sur.*

## Communications.

### On the Epidemics of the Present Epoch.

BY G. A. KUNKLER, M. D., OF PLACERVILLE.

“Es muss doch Frühling werden.”—LEHMANN.

#### I.

IN THE *Pacific Medical and Surgical Journal* of November, 1859, we have published an Essay on Diphtheria, which requires some additional general remarks. We desire before all, to observe that there are two distinct and well defined abnormal atmospheric conditions : first, the endemic, second, the epidemic ; and though the words miasma or malaria are, in general, more particularly applied to the first, they are also sometimes applied to both. By endemic condition of the atmosphere, we mean those permanent or periodical causes interfering with the regularity of the organic functions, and exhibiting these phenomena by the action or the presence of stagnant or impure water, decomposition of matter, want of ventilation and light, dampness, and all other similar or analagous permanent or periodical physical objects. By epidemic condition, we mean the presence of gases, or vapor exhaled by the subterraneous or other combustion, or evaporation, some passing physical phenomenon, or any other accidental or temporary cause, impairing the vital action. For the present, we shall principally consider this last condition, and even this, only imperfectly. We made, many years ago, (in 1830), some observations upon this important subject, in the very crater of Mount Vesuvius, in the time of a moderate eruption, and collected phenomena, (well known to the Ciceroni of Portici) we never found recorded in any work, which bear a close relation to Epidemics. But it would be too long for the present to propound this object, and we shall reserve its consideration for a period when we shall be prepared to investigate the causes and pathology of the Epidemic Cholera. Then we shall also show, that many of the great epidemics which have devastated this earth have been preceded or accompanied by volcanic actions. Dr. Pigne Dupuytren, of San Francisco, published in the *Pacific Medical Journal* of February 1858, an article, attributing quite a number of diseases to miasmatic infection, which he cured all by quinine. Though we are not so exclusive in the matter, we are quite satisfied, by a long and close observation, that many maladies may be produced by an abnormal state of the atmosphere, connected with other peculiar circumstances ; but at the same time, we acknowledge our inability to cure every thing by the same means. It is evident that any active inflammatory action,



whatever may be its course, cannot be arrested by tonics, in the same way as certain passive forms of inflammation, from whatever source they may come, cannot be removed by antiphlogistics, and the faculty to distinguish the true limits by which are connected the several kinds of inflammation, is the very key to the healing art.

In all miasmatic diseases there are two great points to consider and to attend to. The first is the infection itself; the second, the lesions it has produced. This we have already mentioned; but never with sufficient stress, and here we would very particularly insist upon this highly important fact, and as an illustration thereof, we beg to cite a simple but interesting case which came last year within our own practice.

*Case.*—Mr. I—, aged twenty-five years, had worked during the previous summer, in the mines near Folsom, where he contracted the intermittent fever of that locality, which, after a while, assumed a remittent form. He passed the whole winter in San Francisco, and took medical aid; but without effectual relief. In the hope that a change of air would do what medicines were unable to perform, he came to Placerville, and went from one medical gentleman to another; but still without any favorable result. The poor fellow, now out of means to support him further, came to see us, and implored our assistance. He had already taken pounds of quinine and blue mass, and therefore it was of no use to resort to them. In fact, it was of no use trying any thing at all for the infection itself, which must have ceased long ago, and we thought therefore, that our efforts must be exclusively directed to the detection of the lesions created by the miasmatic poison. Nor the stomach, nor the bowels, nor the liver, nor the spleen, presented any thing abnormal; but we soon found a very slight tenderness of the left kidney. A few cups were applied upon the affected part, and some decoction of lin. and sulph. magnesia ordered, by which the fever immediately disappeared and never came back again.

This case shows how often the most obstinate diseases are dependent upon the slightest causes; that they never yield, if these causes are not detected and removed, and if we were more successful than perhaps more learned brethren, we owed it only to a more careful construction of our diagnosis, and a little more attention.

## II.

About two years ago, the volcano Mauna Kea in the Sandwich Islands, was in a most violent state of eruption. Some time afterwards, this same phenomenon was witnessed in several volcanoes of Mexico and South America. Last year, one of the most powerful and long continued eruptions ever witnessed, took place from Mount Vesuvius. At the same time, the same happened with Mount Baker in Washington Territory; and a short time since, an old, long extinguished crater of California, began to emit fire again. This increased subterraneous combustion occasioned earthquakes in many parts of the globe, among which we remark particularly San Francisco and Lisbon.

It is evident that such an increased combustion and heat of the lower

subterranean strata, must have an influence upon the upper strata, and when these happen to contain arsenic, mercury, sulphur, or other volatilizable metals or substances, which can be acted upon by heat; through sublimation, evaporation, chemical action, or any other means, gases might be occasionally and momentarily evolved in certain parts on the surface of the earth, which, combined with other physical, physiological and pathological causes, may generate manifold and serious pathological conditions.

Experience has proved that epidemics do more particularly affect low, flat countries, and that high masses of mountains are less infected by them. This is doubtless due to the greater thickness, and less porosity of the crust of the earth in those places, and to the easier diffusibility of the emitted gases.

There is another fact which has been observed, and is mentioned by most authors on cholera, scarlet fever, diphtheria, croup, and other epidemics, that is, that all these diseases make their appearance mostly at night; that there is generally remission of symptoms during the day time, and again aggravation at night. It is obvious that this cannot take place without a cause, and as the vegetable kingdom evolves oxygen only in day time, and carbonic acid at night, this, and the nocturnal condensed state of the atmosphere, seem to be the reasonable causes of the above facts. It has been objected, that none of the known gases, when artificially inhaled, will produce neither intermittent fever, nor cholera, nor any of the different symptoms manifested in the epidemics and endemics, and therefore they have been attributed, not to the well known gaseous emanations and substances, but to mysterious and supernatural influences.

It is quite true, that no simple gas will exhibit exactly the above effects, for the simple reason, that none of these effects are caused by a simple gas, as they obviously are dependent on the presence of several gases acting at the same time, and on other circumstances, which will increase, diminish, or modify the action of each other, and so bring forth phenomena quite different from that observed during the action of a single gas. Do we not daily witness, with most medical agents we exhibit by the stomach, that their action is increased, diminished, or modified, according to the mode or combination with which they are given, and why should it be otherwise with the several gaseous narcotics or sedatives we involuntarily inhale by the lungs? Though we are incapable to detect, by chemical analysis, most gases evolved into the atmosphere, by the decomposition of matter and other natural laws, for the simple reason, that they dwell only momentarily, in a concentrated state, and that they soon spread into an illimited and unknown space; we know positively their existence. If we are incapable of again collecting, and to demonstrate the balm just escaped from the flower and diffused through the air, is it a reason to deny its existence, and the temporary action it may have exercised upon bodies with which it came in contact, before a sufficient diffusion and decomposition took place?

The high energy and peculiar action of most gases upon the living body, makes it not only probable, but sure, that they are the very cause of most

epidemics; the character of which is in close relation with the actual mixture of these volatile substances. Their inhalation and absorption into the blood, cannot but change the normal state of this liquid, either by chemical action upon the constituting parts, by hindering the access of a sufficient quantity of oxygen, or by overloading the circulation with irritating heterogeneous matter, thus causing quite a variety of symptoms, and a number of multiform maladies.

### III.

These last few years, corresponding pretty closely with the above mentioned increased volcanic action, appeared successively, in almost all parts of the world, an eruptive disease, to which the name of diphtheria or diphtheritis has been given, to indicate one of its most prominent symptoms. In Lisbon, so often visited by terrible earthquakes, the Queen of Portugal herself became a victim of this malady, and in San Francisco, where earthquakes are also so frequent, its ravages have been, and are still frightful.

In this hilly section of California, earthquakes are less felt, and the malady has raged with more severity in deep valleys, than on high grounds. According to a report of Mr. Bogge, published in the London *Lancet*, diphtheria seems to be considered in England as a variety of croup, and so in fact it is considered by Mr. West, (*Diseases of Children*.) In California it is rather viewed as a modification of scarlatina. In a paper of Dr. Kutter, of Dresden, published in the *Pacific Medical Journal* of February last, scarlatina is considered to bear in Germany sometimes a close affinity with measles, with which it has been more generally confounded by older writers. M. M. Trousseau (Report of second November, 1858), Guersant Bouchut (*Gaz. des Hop.* 1858), and the French writers have quite contradictory notions upon this subject, and have always considered rather its effects than its cause. The fact is, that there are many pure cases of croup, diphtheria, scarlatina and rubella; but being frequent, particularly at the present time, there are not only hybrid cases, but cases which, though closely connected with the above maladies, can really be considered as belonging to neither of them. We have observed many of them in our own practice, of which one, a few months ago, was quite extraordinary.

*Case.*—A little boy, son of Mr. S—, of this city, four years old, was taken with a pretty high fever, sore throat and a slight bronchitis. He was exceedingly irritable, and of bad humor, and became soon comatose. We thought the case to be diphtheria, for there was no cutaneous eruption; but on examining, not without great difficulty, the pharynx, we found its mucous membrane and the soft palate, covered with red inflammatory patches, though without exudation. On the fourth day, appeared upon the neck a large, not red, but brown patch, as large as a hand, which soon dried, and disappeared by desquamation. The treatment consisted in warm baths, cold applications to the head, tart. ant., laxatives, emolient drinks and diet, by which the child was soon restored to perfect health. This case was evidently connected with diphtheria and scarlet fever; but strictly it was neither of them. Analogous cases have become, of late, quite frequent in this neighborhood, as

well in children as in grown persons. The throat and tonsils are almost always implicated and connected with quite a variety of other more or less severe symptoms, and all these disorders seem to be generated by the same cause, only somewhat modified. In general, these hybrid cases are of a mild character, and yield readily to mild means; but when they assume the pure types of diphtheria, croup, or scarlet fever, they are often terrible to master. The miasmatic poison will strike like lightning, and bring on irreparable lesions before any medical means are able to act. We had a similar case, just a few days ago.

*Case.*—The son of Mrs. L——, of this city, a little boy five years old, had been playing the whole day; but after sunset complained of a sore throat. At eleven o'clock in the night, we were called up, and found the case to be croup, already in the second stage. There were no inflammatory signs on the pharynx, but the larynx was extremely tender, the breathing difficult and sibilant, and there was a light ringing cough. There was high fever and suffusion of the eyes.

We made immediately a large general bleeding, mercurial inunctions, and ordered emolient drinks and emetic doses of tart. ant., to be kept up every half hour, during the whole night, which produced copious evacuations from above and from below. The following morning the cough was gone, the child breathed quite freely and natural, and the soreness of the larynx had disappeared. No abnormal respiratory sounds, nor in the lungs nor in the trachea, could be detected by auscultation. We warned the mother not to be too confident. We prescribed a dose of hyd. chl. mit., and ordered the continuation of the antimony in emetic doses, to be taken every two hours with emolient and diluting drinks and abstinence from all food. The child passed the day quite comfortably; but half an hour after sunset we were again called up in haste, and found the little patient struck by a violent cerebritis. The larynx and breathing were perfectly free; but the blood was rushing furiously through the carotids up to the brain; the pupils were largely dilated and the child difficult to be kept awake. He was immediately placed in a warm bath with ice upon his head, and leeches were applied to the mastoid process.

These energetic means dissipated soon the tendency to the head, the patient waked up and felt relieved. Another dose of hyd. chl. mit. was then given; sinapisms applied to the soles of the feet; the ice maintained upon the head and antimony continued during the night. A short time before daybreak we were again called up in haste; the child was dying from inflammation of the lungs, which, a few hours previous had been found perfectly free! There is no doubt that the inflammation of the trachea, if it had not actually extended to the bronchis, had irritated or predisposed the lungs to an inflammatory action, and that the disease successively repulsed with great energy from the larynx and the brain, fell violently upon the lungs and proved fatal before effectual means could be taken for their relief.

In this case, death got hold of its prey in less than thirty-four hours, from the beginning of the malady, and though several similar cases have been recorded by M. M. Rilliet & Barthez, Golis, West and others, few of them

proved so quickly destructive. In reflecting upon this and similar cases, all of which spring up without any apparent cause, we cannot avoid perceiving in them, one of those powerful atmospheric actions which has exasperated the circulating fluid. No effectual means having been taken to remove the patient from the action of the primary influence, the exalted state of the blood was kept up, notwithstanding the most energetic measures, got hold of one organ after the other and soon sealed the fate of the patient.

This case also exhibits the very striking fact, that the disease appeared immediately after sunset; that it increased with the increased exhalation of carbonic acid by the vegetable kingdom; that it subsided as soon as this gaseous evolution ceased; that the child got worse again as soon as this gas re-appeared, and that it died a short time before daybreak, when the carbonic acid is most abundant and in a condensated state.

#### IV.

Prof. Lehmann says, "that in the beginning of most diseases, especially those of an acute character, we find the blood more watery than usual, except during the cholera and in the first stages of scarlatina and measles, although not unfrequently, we find the serum denser and richer in solid constituents than the normal fluid; or at all events, as dense, as rich. Hence, it must be concluded, that immediately after the primary invasion of certain diseases the blood corpuscles are destroyed in large numbers, or at all events are not removed in sufficient quantities, and that their metamorphosis are retained for some time in the serum, and thus increase its solid constituents, or at all events balance its loss," (*Phys. Chem.*, vol. I. p. 615.) He says further; "that in the acute exanthemata (or certain eruptive diseases,) there is a diminution of the blood cells, and a corresponding augmentation of the inter-cellular fluid. The serum is denser than usual, and its salts are far more augmented than the organic substances." (*Op. Cit.* 636.)

When the destruction of the blood corpuscles takes place, only in the course of a disease, it may be ascribed to different causes; but when it takes place at the very start of a malady, it seems evident enough that this destruction, the very first morbid process cannot have been induced but by the inhalation and absorption into the circulation of some foreign exterior agent capable to perform this destruction.

It is well known that when blood is treated with water, its corpuscles swell up and their lenticular form is changed; that by the tinct. of iodine they will contract again and assume a yellow color; that by the addition of some of the salts, they become light vermilion, distorted, gagged or star shaped; that when blood is treated with a very large quantity of water, the cell wall completely bursts when nothing can again restore them; that, according to Nasse, ether renders the blood cells smaller, and paler and destroys a part of the pigment; that diluted hydrochloric acid makes the blood very dark and the corpuscles very thick, and that caustic alkalies and several organic acids make the blood blackish brown, and give it the consistence of a jelly.

But all this takes place only when the blood is directly acted upon by the above mentioned substances, and not when they are administered through the stomach. Therefore, it is manifest that whenever the blood is found in any way injured, at the very beginning of a disease, this action must have come directly from without, by some of those noxious gases, so often present in the atmosphere, and cannot proceed from any mysterious cause.

It is well known how oxygen and carbonic acid act upon the blood. Other gases exert upon it a chemical action, like dilute organic acids, alkalies, etc. (*Op. Cit.* p. 573.)

But our knowledge is still very imperfect on the exact influence of each particular gas upon the circulatory fluid, and this deficiency makes it impossible to investigate more closely this important subject. However, by the experiments of Prof. Mattencci, we know, that when sulphuretted hydrogen is mixed with blood, it cannot be arterialized again by oxygen, (*Ph. Liv. B.* p. 135.) We likewise know that nitrous oxide renders blood darker, almost brownish red and very turbid, so that the microscope exhibits the whole fluid, as if it were filled with flakes; neither oxygen, nor carbonic acid restores the clearness of the original color of the fluid, and the greater part of the substance crystallizes unchanged. The impossibility to restore again by oxygen, or other substances, the blood to its normal condition, shows clearly that the destruction of the blood cells has taken place. If instead of introducing atmospheric air into the lungs of an animal, we make it breathe azote, carburetted hydrogen, carbonic oxide, carbonic acid, binoxide of azote, etc., death takes place more or less rapidly, and every part of the body is found black, (*Op. Cit.* 123.)

These observations lead us to the conclusion that the several gases contained or diffused through the atmosphere act chemically upon the circulatory fluid, according to their nature, combination, and more or less prolonged action: first, by changing or impairing the form or constitution of the blood corpuscles; second, by destroying the blood cells, or causing their investing membrane to burst. Any such change, on a small portion of the blood, may cause only a small disturbance. A great destruction of this kind will irritate the nervous centres, exalt the circulation, increase in number the pulsations, or the force of the heart's action, and bring on fever and various inflammatory symptoms; a still larger infection will soon exhaust the vital energy, and a very large destruction of the blood cells must necessarily occasion immediate death.

v.

By the experiments of Weber and Lehmann upon criminals, it has been ascertained that the weight of the blood, to that of the whole human body, is in a ratio of about one to eight. It has also been ascertained, that the quantity of blood is always nearly the same, and that if an abstraction is made of this fluid, by any cause, it is immediately replaced by a corresponding quantity of water. In this case, the whole mass of the blood remains the same; only there will be an increase of serum, and a corresponding diminution of the blood corpuscles, and of more or less perfected blood cells. The

experiments of Schwann, Bichat, and Kolliker, have shown that the origin of these blood cells takes place in the chyle and in the liver. Their generation appears to be rather slow, and their disintegration must be therefore in the same way. We know that Harless observed that the blood corpuscles of a frog disappear entirely after nine or ten alternations of oxygen and carbonic acid, and as according to the experiments of Poisenille, Hering, and Hales, not over two and a half minutes are required, for the complete circulation of the blood through the system, the destruction of the perfected blood corpuscles would take place about every twenty-five minutes.

So quick a disintegration, seems to Lehmann, to be not in proportion to the time required for the generation and development of the blood cells, and he thinks therefore, that there must exist a great difference in the action of oxygen and carbonic acid upon the blood corpuscles of frogs and those of men. However this may be, this difference is only relative to the more or less quick destructibility of the respective blood corpuscles, and not to the destructibility itself. Now, let this destruction have taken place, either by the natural alternative action of oxygen and carbonic acid, or let it have been done by the preternatural action of some other gas, the products of the disintegrated blood corpuscles, will in each case be burnt, and naturally be expelled from the circulation as all other disintegrated matter, provided this destruction has not been too great, and there is a sufficient quantity of oxygen present. If the disintegrated matter is largely diffused through the circulation, it must produce obstruction and irritation, and if very largely so, it is bound to bring on a complete annihilation of the circulation and death.

It may be objected, that most noxious gases being of a greater density than atmospheric air, their diffusion through the pulmonary vesicles, according to the law of Graham, verified by Valentin and Prunner, is not easy. But Lehmann has shown that this law can only stand if there is an equal pressure on both sides of the wet membrane, and as the muscular force exercised in the act of exhalation takes place on one side only of the pulmonary cells, it renders this law wholly inapplicable to our subject. Besides, the experiments of Sir H. Davy have proved that even carbonic acid, which is one of the very densest gases, can be inhaled, provided it be sufficiently diluted with atmospheric air.

Prout, before us, has signalized Seleniuretted hydrogen as the cause of influenza, coryza, etc. We have attempted to show that diphtheria, croup, scarlatina, rubeola, and other throat affections are dependent mainly on carbonic acid, sulphuretted hydrogen, and a similar category of gases. In due time, we shall endeavor to prove that the intermittents — yellow fever, and all kindred diseases — are originated by the combination of carbonic acid with carburetted hydrogen, and that cholera is generated by the simultaneous action of carbonic acid with arseniuretted hydrogen. It is obvious that none of these diseases are brought on by one agent alone: their most common appearance during the night; the remission of the symptoms often exhibited in day time, and their aggravation immediately after sun set, show sufficiently that night air, or the increased presence of carbonic acid and the

condensed state of the atmosphere in general, have a powerful influence upon these morbid actions; and there seems to be no doubt that they depend upon the simultaneous action of several gases, increasing and modifying the action of each other.

Many diseases of the throat very likely, depend upon the irritating action of the carbonic acid alone, to which attention has been drawn by Sir H. Davy. Its existence, by its specific gravity, in a concentrated state, in the very lowest atmospheric strata, is one of the causes why children, by their low stature, are more than grown persons exposed to its pernicious influence, and if infancy is generally only once exposed to certain eruptive diseases, we think that it must be attributed to the fact that the system gets easily accustomed to the influence of certain substances, particularly of narcotics, and that, after a prolonged action upon the animal body by these substances, they become quite inert.

#### VI.

In the present state of medical science, it is impossible for us to develop with more precision the ideas which we have advanced; and we are sensible that our remarks are rather incomplete. However, from the whole of this essay, it results quite clearly, that it is by the action of these heterogeneous gases that the several pathological states which we have mentioned are induced. That fact of itself, is of the highest importance; for, whatever be the gases and the combinations in which they act, it allows us to adopt preservative measures and a rational treatment, based upon entirely new and efficacious principles.

It is evident that for the removal of any miasmatic disease, to get out of the way as soon as possible from the supposed and insensible focus of infection, is the first condition of success, and for this purpose, even the removal of the patient from one house to another may, in many cases, be sufficient. It is true, that some times, the very first stroke of the miasm may already have brought on irreparable mischief; but this is seldom the case, and whenever it has not already been done, a change of place will give us the very best chance. Our own experience in diphtheria has been, that we have lost, in severe cases, all the patients who by one reason or another, have not, or could not be removed, or have been removed too late. On the other hand, we have not lost a single patient who has been removed at the onset of the malady, or nearly so; for then, the symptoms never afterwards assumed a desperate gravity, and yielded readily to a rational treatment.

As it has been already shown, most noxious gases begin to act more particularly by destroying or impairing chemically, more or less of the blood corpuscles. When only a small portion of them have been impaired or destroyed, nature itself will soon throw off, by the usual channels, the heterogeneous matters resulting from this destruction, and the patient may recover without further medication. When the destruction of the blood corpuscles has been rather considerable, which the severity of the symptoms will readily indicate, it can hardly be expected that nature alone will do the work; and to prevent greater irritation and congestion, we must, by increasing the



action of the lungs, the liver, and the cerebral secretory and excretory organs, assist nature to remove the heterogeneous matter, and to correct the morbid condition of the system. But when a very large quantity of the main element of the blood has been affected or destroyed, so that the circulation is not only overloaded by heterogeneous matter, but by the destruction of the blood corpuscles, it is unable to carry to the nervous centres the oxygen necessary to the nervous energy, the balance of action between the several organs will soon be annihilated; inflammation in some structure, and in some shape, will set in; collapse will soon follow, and the patient will die, generally after a very short malady. Such serious cases must always be looked upon with the greatest suspicion. There is no trifling. We must be prompt and energetic; for there is our only hope, if any hope is left at all. As miasmatic diseases are always dependent on the simultaneous action of several gases, among which carbonic acid and sulphuretted hydrogen, constantly largely diffused through nature, must of necessity always, play more or less their part of influence, it becomes of the highest importance, by destroying their effect, to diminish or change the action of the other gases also. Hence, in all miasmatic affections, it will be right to have, when possible, in the bed chamber of the patient, flat vessels with a wide surface, filled with lime-water, placed upon the floor, to absorb the carbonic acid present. In day time there ought also to be free low ventilation, and evolution of some chlorine to decompose the sulphuretted hydrogen. But after sun set, the doors and windows ought always to be carefully closed; no flowers, and if possible, no fire left in the apartment. At that time, the deutoxide of hydrogen, plenty of oxygen may be procured, which will considerably assist the action of the other medical agents. These rules are applicable, not only to diphtheria, but to croup, scarlet fever, and all miasmatic affections generally.

If our remarks are correct, they will tend to remove the confusion and contradiction so often met in Pathology generally, and in the Epidemics and Endemics in particular. The exanthematæ and eruptive diseases of children especially, viewed in a more rational manner, will yield more readily to the treatment of the intelligent physician, and the destruction of those passing visitations, the terror and desolation of humanity, will be sensibly diminished.

We must bear in mind, that therapeutical agents are only tools in our hands, by which we obtain only certain physical effects. We must always endeavor to seek the cause of the disease and act, if possible, not upon its effects only, but upon the cause itself, the removal of which will soon facilitate the removal of the effect also; for "*Non e la medicina che cura il male, ma e il genio, che sa prevenire scoprire e distruggere le cause, che portano ostacolo alla regolarita delle funzioni vitali.*"\*

*Placerville, California. April, 1860.*

[\*The reader of Italian will pardon us for giving the translation of this last clause of Dr. Kunkler's able paper, for the benefit of those who may not be *au fait* in the musical dialect: "It is not medicine which cures disease, but it is the skill which discovers and destroys the causes that furnish obstacles to the regularity of the vital functions."—ED.]

## On the Influence of Chloroform in Delirium Tremens.

BY H. H. TOLAND, M. D.

DELIRIUM Tremens is a very common disease in California, not because its inhabitants are more intemperate than those in other portions of the United States, but in consequence of the numerous sources of mental excitement to which they are exposed, and the various injuries sustained by the hazardous pursuits in which many of them are constantly engaged. It is not confined to the intemperate, notwithstanding they suffer more frequently than those who live temperately. Even females, who are comparatively exempt, sometimes suffer from this extraordinary affection when exposed to great and protracted mental excitement, who have never indulged in the use of alcoholic stimulants.

The symptoms of delirium tremens present such a striking similarity to those of encephalitis, that frequently a careful consideration of all the circumstances connected with the case is indispensably necessary to enable the physician to determine the character of the difficulty with which he has to contend. The production of sleep being the great indication in every case of delirium tremens, a knowledge of all the remedies that exercise that influence, their mode of administration, and the cases in which they are particularly applicable, become important. Having frequently succeeded with chloroform after all other means had failed, and sometimes even under the most unfavorable circumstances, I have concluded to publish the most interesting cases, believing that they will be acceptable to the profession.

### CASE I.

In 1855, a highly respectable and intelligent lady, aged 28 years, and the mother of several children, was greatly distressed by the absence of her husband, resulting from the detention of the ship on which he was expected. Being unable to sleep for two nights, delirium supervened with the usual symptoms that characterize the development of this disease. Laxatives and the free use of opium and ammonia having failed to afford relief, and the condition of the patient becoming hourly more unfavorable, although I had never administered chloroform under such circumstances, I determined to avail myself of its influence, hoping that if sleep could be procured even for a short time, that it might render the system more susceptible to the action of the remedies which had been so freely administered. About ten o'clock on the third evening, chloroform was carefully given by inhalation until its anesthetic results were produced, and continued when necessary until she had slept two hours. I then withdrew, and the patient was watched but not disturbed until ten o'clock the following morning, having enjoyed a refreshing sleep of twelve hours. A repetition of the remedy was unnecessary, her recovery being both rapid and uninterrupted.

## CASE II.

During the excitement resulting from the organization and action of the Vigilance Committee, a highly intelligent gentleman of this city, aged 40 years, and otherwise in good health, found that he was unable to sleep, although he had not been drinking to great excess, which was followed by delirium tremens of a violent form. After the administration of laxatives, one grain of opium was given every hour until thirty grains had been taken, combined with cold applications to the head and all the means usually adopted to equalize the circulation and allay nervous excitement. Having previously found this course of treatment almost always successful both in private and hospital practice, and being unwilling to administer a larger quantity of this powerful remedy by the stomach, ammonia and alcoholic stimulants in moderate quantities were substituted, and laudanum enemas given as recommended by Dupuytran, and which I saw practiced with satisfactory results in 1832 in the Hotel Dieu, where the disease was exceedingly prevalent amongst those who were wounded in the revolutionary struggle in which they were then engaged. This change was made on the morning of the third day after the symptoms became sufficiently violent to excite alarm, and about four o'clock in the afternoon I was summoned to his assistance, and found him recovering slowly from a violent convulsion, the second that had occurred in half an hour. His eyes were injected, he was talking rapidly, and busily engaged in endeavoring to remove a rope which he supposed had been placed upon his neck by some member of the Vigilance Committee, and with which he was to be speedily suspended. His pulse was small and excessively rapid, and his body was bathed in sweat. Being confident from his condition and the inefficacy of the previous treatment, that more powerful means must be resorted to or he would soon perish, I determined to avail myself of the effects of chloroform, to which I was so much indebted on a former occasion. When partially under its influence, a fearful convulsion ensued that lasted about ten minutes, and when it subsided he fell into a disturbed sleep. I sat by him three hours, and administered the chloroform as often as its effect appeared to diminish, and until his sleep became tranquil and natural. His room being then darkened, he did not recover from the effect of the remedies until eight o'clock the next morning. He occasionally became conscious, would ask for water, and turn over in bed, then speedily relapse into his former condition. In the morning I found him calm and rational, and his recovery was not only rapid but he has since enjoyed uninterrupted health. The action of chloroform in this case was both unmistakable and extraordinary, as the patient could not have survived many hours under the treatment generally approved by the ablest physicians, and which under ordinary circumstances usually acts speedily and satisfactorily.

## CASE III.

A saloon keeper, aged 50 years, after indulging to excess for several months, was attacked with delirium tremens, and soon became so unmanageable that force was necessary to prevent him from going undressed into the

streets. Having administered the usual and most approved remedies without affording relief, I subjected him, but not without great difficulty, to the influence of chloroform. In consequence either of the resistance he made to the administration of the remedy or a constitutional idiosyncrasy, its effects were at first exceedingly unpleasant. His breathing was stertorous, his head drawn forcibly back, and his tongue so much retracted that it became necessary to seize the latter with dressing forceps to remove the extreme difficulty of respiration. After being under its influence for fifteen or twenty minutes, his breathing became more natural, and he slept from ten o'clock in the evening until the following morning, when I found him relieved, although greatly debilitated and suffering from muscular pains resulting from the violent exertions he made before he could be brought under the influence of the anesthetic.

#### CASE IV.

A man about the same age, and similarly situated, after indulging until his general health was greatly impaired, was attacked with an aggravated form of delirium tremens, and being unwilling to lose time by the administration of the usual remedies, I resorted to the use of chloroform at once, or at least so soon as the action of an enema could be obtained. He was easily brought under the influence of this remedy, and was kept in that condition until his nervous system was quieted. He awoke after sleeping eight or ten hours, and has since been as rational as before the occurrence. It is necessary in persons of a full habit, to administer chloroform with great care, to avoid the consequences that might result from the careless use of the remedy.

I have found the same precaution necessary even when the brain and nervous system are both entirely healthy, in cases where a patient struggles violently when partly under its influence, which frequently occurs. They generally fall suddenly into a state of insensibility, accompanied with stertorous breathing, and without prompt assistance they would die of strangulation produced by the posterior fauces being filled by the violent retraction of the tongue. Experience has rendered me very cautious in the use of this powerful remedy, although I never subject a patient to a painful operation without availing myself of its extraordinary influence.

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### Poisoning by Strychnia.

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*Jamestown, California, April 26th, 1860,*

MESSRS. EDITORS:—I send you a brief account of a case of poisoning by strychnia, successfully treated by camphor, which from the quantity taken, as well as the length of time elapsing before treatment, may prove interesting.

On the eve of the 23d of this month, I was called upon to attend Mr. C—— W——, residing about four miles from town. On my arrival at 11

P. M., found the patient sitting up in bed, (he informed me he could respire more freely in this position,) perspiring very freely, pupils dilated, and limbs rigid, the fingers being clenched. He informed me that three hours previous to my arrival he took five grains of strychnia in a tumbler of brandy : had laid down and slept for two hours, when he awoke in a convulsion. Since then he had had five or six spasms, increasing in severity and duration, and said it was impossible for him to recover. Had not vomited. I prepared for exhibition 10 gra. of pulv. camph. in emulsion, when on approaching the cup to his lips he was seized with a violent tetanoid convulsion, the spasm apparently commencing in the cervical muscles and extending to the face and chest, producing trismus with slight opisthotonos. Its duration was about two minutes, during which time respiration seemed entirely suspended. At its expiration the camphor was administered with some difficulty and repeated every half hour to an hour until 6 A. M. the next morning, when the spasm, which latterly had been decreasing in severity, entirely ceased, and but an occasional slight twitching of the muscles was discernible. The patient rapidly recovered and is now in good health. The amount of camphor given was about scruple iv., which produced neither cerebral nor gastric derangement.

I think there can be no doubt as to its valuable properties as an antidote.

Very respectfully,

M. TYLER DODGE, M.D.

[We have only one regret with reference to the above communication, which is a model of conciseness; that is, that our correspondent did not ascertain so as to place it beyond all doubt, that his patient did actually take strychnia. Will the Dr. have the kindness to inform us a little more definitely on this point? He will perceive that the readers of the *Journal* have only the patient's word that he took five grains. The Dr. well knowing the man, is perhaps, satisfied the assertion is indubitable; but he does not tell us he has any such intimate acquaintance with his character. Our correspondent will see we have no desire to criticise, or find fault, but simply to be enlightened upon a point on which he says nothing. If the man did actually take five grains of strychnia, and did not vomit afterwards, and took camphor and did not die, camphor is a probable antidote to strychnia.—ED.]

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### The Advantages of Quackery.

IN attempting to point out to the profession the advantages of quackery, I feel that I am espousing an unpopular cause. I trust however, to be able to prove that notwithstanding the many evils we so constantly see it inflicting on our fellow creatures, the unprecedented development of quackery in the present age, is but one of those beautiful, but often unappreciated facts, that are silently at work carrying out the harmonious development of the universe. I must, however, prelude my observations on the beneficial influences of

quackery, by referring to the means by which the different races of our domestic animals are improved. It is well known that this is accomplished by selecting for breeding those individuals, which either accidentally, or from some artificial modification of circumstances, have been produced with qualities that it is wished to perpetuate; the weaker or less developed of the race being used as food, or neglected. In the natural or undeveloped state of society, the human race itself is exposed, to a certain extent, to an analogous process, not brought about indeed by any artificial means, but as the result of the many deleterious influences that tend to destroy the weaker or abnormally constituted individuals. Amongst savage nations, exposure to the elements, privation of food—excessive fatigue, tend to cut off at an early age those whose physical constitutions are not the most perfect, whilst the superior cunning of enemies, in the state of chronic warfare in which most savage nations exist, must lead to the early destruction of those whose intellects are below the average. By this process of elimination, it is evident that it is only through the more perfectly organized individuals that successive generations are continued.

As society settles down into a more civilized form, its more weakly and imperfectly organized members are to a great extent guarded against those influences, that in a less artificial state would have lead to their early destruction. More particularly is this the case in regard to those whose imperfect development is shown principally in weakness of the intellectual powers; as they are entirely shielded by our social polity from all deleterious influences. A large mentally inferior element is thus retained in society for the production of succeeding generations, and must if not removed, lead in the lapse of time to a deterioration of the race, or must at least act as a retarding influence on its development. That some remedy would be provided against such an evil, every analogy in the course of nature leads us to believe. Since the first germ of life was called into existence, thousands of ages have recorded their testimony on the rocky tablets of the globe, to the continued development of organized beings. The means by which this has been brought about, are as yet but thinly indicated to the eye of science. I have already alluded to some of the subordinate agencies tending to carry out this law in a less civilized state of society, and have also shown that an advanced civilization has a tendency to neutralize the means then employed for the development of the race. Are we then to imagine that we have arrived at a break in this grand chain of progressive development?—that those laws which presided over the first production of organized matter, and in unison with which the successive creations that have tenanted the earth have been called into existence, have now ceased to operate? Poor indeed must be our conceptions of the great artificer of the universe, if we suppose that the development of the most noble of his creations can be thus thwarted—that no resource can be found, by whose counteracting agency the disturbing element thus introduced can be again eliminated. The problem to be solved was, how to eliminate from society in a manner consistent with an advanced stage of civilization, certain elements, which, if retained, could not but interfere with

its future progress ; by what means, in short, could a certain class of individuals be removed, who had offended against no law, who were guilty of no crime, but who had the misfortune to have been born with intellectual faculties below the average standard of the race. It requires but little observation to perceive, that it is to quackery that we must look for the solution of this interesting problem, and even a superficial view of its action on society, and on the nature of its victims, will suffice to show how perfectly it succeeds in eliminating a large portion of that effete element, which, if retained, must have exerted a retarding influence on human progress. With few exceptions, the genus quack, whether as homœoquack, hydroquack, psychoquack, motoquack, principally fattens on those elements of society, which from imperfect mental development it is highly desirable should be removed, and the perfect manner in which they accomplish this object affords but another example to those so frequently met with in the investigation of nature, of the beautiful adaptation of the most simple means to arrive at important results. I have no doubt but that a carefully conducted enquiry would show that as advancing civilization affords a more complete protection to the intellectually weaker members of the community, by so much is it favorable to the spread of quackery ; nor is this to be regretted, for as it is necessary for the development of the race that this intellectually weaker element should be removed, is far less repulsive to our feelings to see it deliquesce under a pile of wet blankets, or fade away with decillionth dilutions, than to have it taken off by the tomahawk of the more cunning savage. The object is attained by the one process as well as by the other, and quackery certainly has the advantage of doing it in the least disagreeable manner.

I trust that these few remarks on the uses of quackery will lead the profession to look upon it as a necessary evil, and as in the present state of our civilization it would appear to be an indispensable element in carrying out one of the highest and most comprehensive laws of creation, I consider that it will be perfectly useless to attempt to legislate it out of existence.—M. D.

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**THERAPEUTIC APPLICATIONS OF CLAY.**—According to a short paper by Mr. Richard, of Soissons, inserted in the *Revue de Therapeutique Medico-Chirurgicale*, clay would be an excellent topical application for the sting of insects, wasps, mosquitoes, etc. It is also remarkably successful in the case of wounds aggravated by inflammation of the skin, phlegmon, infiltration of the cellular tissue and irritation of the lymphatics. Clay rapidly dispels the swelling consequent upon serious sprains, in short it is an antiphlogistic and discutient applicable to all external phlegmasiæ.

This substance should be used in the shape of a poultice ; it is spread upon linen in a layer of four lines in depth, and is applied to the diseased part protected by muslin, and should be renewed whenever it becomes dry or heated.—*Champonniere's Journal*.

## Editor's Table.

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**WANTED.**—If any one has copies of our January (1860) number to spare, we will remit cost on receipt of them at this office, and be particularly obliged in addition. Several subscribers wish back numbers, but our January edition is entirely out. We take this occasion to say that the Journal is in a living condition, and will not expire without our subscription list *materially* diminishes. At the same time we respectfully request the few whose subscriptions are in arrears to remit at their earliest convenience. Money may be sent through the post-office, *in registered letters*, at our risk. By this means \$5 can be sent from any portion of this State or Oregon for ten cents. This small commission may be charged to us; thus \$4 in coin and seventy-five cents in postage stamps will not be refused for any one year's subscription now due. Subscriptions begin with the month in which the order is sent, unless otherwise requested.

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**A SENSIBLE PROFESSIONAL BROTHER.**—We are sorry the Journals cost so much, but we could not help it. We have but four bound sets left, and we are certain there are but four hundred copies of Vol. 2d extant. We will furnish four copies of each volume, (1 and 2,) at \$7 per copy, here. The following is an extract from a letter received from the "sensible brother" above referred to:—

*Scott River, May 2, 1860.*

DR. WOOSTER,

SIR,—The two volumes of the Journal came duly to hand, and although after paying express charges they cost me \$10 per volume, still I would not be without them for twice that amount, I value them so highly. \* \* \* \* \*

Yours truly,

DR. WM. RUSSELL.

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**PERSONAL.**—Dr. McCormick has left the tripod which he designed at first to occupy only temporarily. He has promised to aid us by his counsel, as he has done heretofore. The simple truth is, the annoyances to which an editor is necessarily subject, are not at all consistent with *otium cum dignitate*, which our late excellent associate has every right to enjoy undisturbed. He has been a good and friendly counselor to us, and we have not the least expectation that our amicable relations will be changed. D. W.



DOUBLE CATARACT—GRANULAR CONJUNCTIVITIS.—The *Gazetta degli Ospedali*, (Feb.) says Prof. Botto in October received into the hospital, a patient 78 years old, whose vision had been failing since the previous June. In July previous, he had acute conjunctivitis, for which he had been bled six times during that month, and leeches on the temples twice. [The writer does not say whether this had been done by the advice of a physician.]

Dr. Botto diagnosed double cataract, complicated with granular conjunctivitis. In two months he cured the conjunctivitis by the daily application of sulphate of copper to the granulations, and dropping into the eye a solution of nitrate of silver.

On the 14th December, Dr. B. executed depression and *reclination* of the cataract of the left eye by scleroticonyxis. He employed the slightly curved needle of Dupuytran, which, being introduced at the desired distance from the cornea, was directed transversely forwards into the posterior chamber, and then with a single movement of reclination, (reversion,) the cataract was depressed to below the level of the pupil. No untoward symptoms resulting, on the 21st December the same operation was performed in the same manner on the right eye, and on the 31st December the aged patient left the hospital, seeing perfectly with the aid of convex glasses.

This may be considered an excellent case, considering the age of the patient and the previous treatment.

TREATMENT OF ORCHITIS BY COLLODION.—Prof. Botto (*Gazetta degli Ospedali*,) recommends treatment of orchitis by collodion applied over the whole scrotum, both of the well and affected side. Bonafond long since recommended its application for compression on one side, but all who have tried will agree that it cannot be relied on, either as curative or as a means by which equable and uniform pressure can be obtained. Dr. Botto has completely cured bad cases of acute orchitis from gonorrhœa, in ten days, by applying pressure by means of numerous paintings of collodion over the *whole* scrotum, the testicle affected being kept up on the corresponding groin. If the cuticle of collodion cracks, of course more must be applied, so that the tegument shall not pouch through the rents or cracks.

We have taken occasion to employ collodion in two cases recently, and must say it utterly failed. This result is, perhaps, from our want of dexterity; nevertheless, we had to fall back on leeches and punctures with the lancet for the relief of our cases.

"SUFFOCATION IN A ROOM FOR WANT OF AIR," is the heading of an item in the *Lancet*, and the comments thereon apply to the United States as well as to the United Kingdom. If either nation exhibits more affection for fresh air than the other, it is that of the British Island, where, the *Lancet* says, one hundred and twenty-five thousand annually die of respiratory diseases. Why do people go to sleep in church? Because they are anæsthesiated with

carbonic acid from other peoples' lungs. Why do they get a cold at church or theatre? Because their blood remains an hour of more without depuration by exposure to fresh air. For the same reason, people have headache, and cough in church or other public assemblies. We say it boldly; it is more deleterious to the health of each man, woman and child, to set an hour on Sunday, in a comfortably compact assembly, such as is usually present to hear good preaching, than it would be for each man, woman and child to take a good sized drink every three hours during the Sabbath, of what is called strychnine whisky. It is more injurious to health for two persons to sleep in, or occupy a room every night, ten or twelve feet square, without direct and free communication with the open air, than for those persons to inhale a quarter of an ounce, each, of chloroform, or the fumes from a pound of charcoal every night before going to bed. The aperture admitting air into an ordinary sleeping room should be at least equal to twelve inches square; or a window three feet wide should be raised or lowered four inches, and the entrance of air not obstructed by closed blinds or even lace curtains. The occupant of a room thus ventilated, will require less covering, will sleep more quietly and uninterruptedly, have more pleasant dreams, and will be much less liable to take cold. We cannot imagine any condition of the health in which this amount of ventilation could be objectionable. But our comment, like most commentaries, is longer than the text.

"SUFFOCATION IN A ROOM FOR WANT OF AIR. — This is the kind of asphyxia which slowly kills many thousands in these kingdoms. Rarely does so rapid and direct a calamity ensue as that which is related this week of the family of John Robertson Gaffer, on the Hamilton and Strathaven Railway. Himself, wife, infant, and three children were huddled in one bed, in a small, dingy, smoky dwelling, consisting of one room without ventilation. About five A. M. the wife awoke. She found her infant, aged nine months, dead in her arms; a boy named Allan, aged three years, also dead; the third, a girl nine years old, seemingly dying. Her husband faint and weakened, dragged the girl from the room, and thus she fortunately recovered. This was suffocation from want of ventilation. And thus, in a minor degree, do hundreds of thousands slowly asphyxiate themselves in their sleeping rooms, and sitting rooms, and so favor the advances of those respiratory diseases which carry off annually half a quarter of a million of our population."

MR. Weeden Cooke, (*Lancet*, April, 1860,) of the Royal Free Hospital, had six thousand cases of Gonorrhœ, on which he had tried all kinds of treatment. He finally arrives at the chemical treatment by alkaline carbonates internally, to neutralize the acid in the urine; lead lotions and elevation of the penis against the abdomen in œdæma of the prepuce is commended. After the inflammation has subsided, a muco-purulent discharge being left, Mr. Cooke prefers the chloride of zinc to any other injection. He uses this, two grains to the ounce of water: one grain sometimes sufficient. In cases of low vitality from disease or otherwise, tonics are required instead of the alkaline treatment (of course the alkali is of no avail when the urine is not acid.) Tincture of iron, sulphuric acid and bark, or gentian, or columba,

may be advantageously employed from the commencement in some of these cases. But the chloride of zinc injection must not be omitted here. Copai-va not used. This treatment has been attended with very few cases of orchitis. Long established cases of gleet yield readily to these injections and generous living. Beer or wine not prohibited, but recommended in these old cases.

"THE CALIFORNIA BEER.—The editor of the *Dover Weekly Journal* of the 27th, thus speaks of this new article of family use.

"*California Beer*.—A gentleman of this county informs us that he has reliable information from one of the professors of one of the Medical Colleges at Nashville, that several deaths have recently occurred that can be directly traced to the use of California Beer. *Post mortem* examinations have discovered the yeast in the viscera.

"This beer has been recently introduced into this country, and has been found to be very useful in making light bread, etc. We would, however, advise our readers to desist from the use of it, at least for the present."

THE above item from the Columbia (S. C.) *Banner*, edited by a regular physician, is "pretty good."

"Yeast in the viscera," and therefore they died. Why, there is yeast in all beer except it be exhausted by a long protracted vinous fermentation.

Is it imagined the yeast has induced some transformation in the blood by being absorbed from the stomach *as* yeast, and in this state imparting its motion to the mass of the blood, causing its fermentation? But the ferment is itself insoluble. How did it get into the blood? The first stage of fermentation produces diastase; the second, the lactic acid; and the third, alcohol with the disengagement of carbonic acid; now if the sugar in the blood should become lactic acid, and the latter alcohol and carbonic acid, the victim might die drunk and asphyxiated from yeast without "California beer," providing always there were sugar enough in the blood to produce enough of these deleterious compounds on decomposition, and gluten enough to keep up the fermentation. But filtered yeast is no longer a ferment: it must be filtered through the most delicate filters before it can get into the "viscera;" filtered yeast is no yeast: *ergo*, yeast was never found in "the viscera," *ergo*, the patients of the Nashville Prof. did not die of yeast left in the "California beer."—Q. E. D.

### Notices of Books.

LUXATION OF THE HIP AND SHOULDER JOINTS, AND THE AGENTS WHICH OPPOSE THEIR REDUCTION. By Moses Gunn, A.M., M.D., Professor of Surgery in the University of Michigan, Detroit, 1859.

WE have received a copy of this monograph. As usual with everything written by the author, it is in clear, concise and good English, and good sense. It is published entire in the 2nd volume of the *Pacific Med. and Surg. Journal* p. 350, *et seq.* from the *Peninsular and Independent*.

**AN EPITOME OF BRAITHWAITE'S RETROSPECT, OF PRACTICAL MEDICINE AND SURGERY**; containing a Condensed Summary of the most Important Cases; their Treatment, and all the Remedies and other Useful Matters embraced in the Forty Volumes—the whole being Alphabetically Classified, and supplied with an Addenda, comprising a Table of French Weights and Measures, reduced to English Standard—a List of Incompatibles—Explanation of the Principal Abbreviations occurring in Pharmaceutical Formulæ—a Vocabulary of Latin Words most frequently used in Prescriptions, and a Copious Index. By Walter S. Wells, M.D. To be completed in Five Parts at One Dollar each.

THE *Retrospect* itself has been a most valuable periodical for the last forty years, and is to a degree an Encyclopædia of Medical science, especially of the progressive and contemporary portion of medical learning.

This Epitome is a condensation, an extract of the "active principle" of the whole forty volumes. All the matter that could be spared from those has been eliminated, and we have in this epitome the indispensable residue.

If the huge standard books were submitted to this process of distillation, a great many huge octavos would shrink into very diminutive duodecimos. There is too much written *about* the fact: the explanations are so copious and diffuse, that the fact is lost in a mass of intellectual alluvial, just as California gold lies under two hundred feet of worthless earth. Our authors write as if for the people at large, instead of a learned few. Life is too short to wade through these huge masses of verbiage. We hope this example will be imitated often, and that we shall have epitomes of the standard works: if we had, the latter would seldom get an airing.

This Epitome is worth ten times the money. It is worth a dozen Medical Journals, our own not excepted.

**AN INTRODUCTION TO PRACTICAL PHARMACY**; Designed as a Text-book for the Student, and as a Guide for the Physician and Pharmaceutist, with many Formulas and Prescriptions, by Edward Parrish, Graduate in Pharmacy; Member of the Philadelphia College of Pharmacy, and of the American Pharmaceutical Association; and Principal of the School of Practical Pharmacy, Philadelphia. Second edition, greatly enlarged and improved; with two hundred and forty-six illustrations. Philadelphia: Blanchard and Lea. 1859.

THIS is a large octavo of 700 pages. It is divided into five parts. *Part 1.* Preliminary, treats of furniture, implements, etc., of the dispensing shop, of weights, measures, specific gravity, etc., and United States Pharmacopœia. *Part 2.* Treats of Galenical Pharmacy. *Part 3.* Of Pharmacy in its relations to organic chemistry. *Part 4.* Of Inorganic Pharmaceutical Preparations. *Part 5.* Extemporaneous Pharmacy.

We have space only for the following extracts from the Preface. The syllabi spoken of cannot be too highly commended. They are excellent labor saving tables.

"The extensive use of syllabi, which formed a conspicuous feature in the first edition, has been found so convenient as to be still further extended in the present. In this form we are enabled to present to the eye an immense number of facts in small space, and to display them effectively in their relations to each other. The syllabi in Part III. and Part IV. have been prepared with great labor, and are especially commended to careful study.

"This volume is not the work of a secluded student in his closet, it has been composed by a practical pharmacist and druggist, in the midst of the daily routine of his shop, and surrounded by the difficulties incident to an active business career; it is, necessarily, imperfect in many of its details; but the first edition having been received with an appreciation of its scope and design, the second is commended to the favorable consideration of physicians and pharmacutists."

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MEDICAL LITERATURE IN CALIFORNIA, continued from the *Pacific Medical and Surgical Journal*, by J. D. B. Stillman, M.D.

THIS is a neatly printed *non*-professional tract of eight pages. It purports to be an apology for doing a very foolish thing, which very thing is repeated, with additions, in the tract. It contains a republication of the matter for the writing of which the author apologizes, then a *private* letter from our late associate editor to the author of the tract. We could hardly have expected, *a priori*, this little apparent betrayal of confidence from one who acknowledges he "had entertained the kindest feelings of *gratitude*" for the gentleman whose private correspondence he makes public without his permission. The gentle allusion to ourself we pardon. When we became an editor we expected to have our kindest intentions misconstrued, for which we are no doubt frequently indebted to the ambiguity of our diction.

We sympathize with the author of the tract in his utter abhorrence of "powder and lead." They are villainous articles, and it is a shame that they should be allowed by society to interfere with the freedom of speech. In a true democracy like ours, this grim Senate for reference should be put down! but still as long as this high court of appeal is recognized, gentlemen, *generally*, have thought best to keep its fatal decisions in view. The "code" is no test of right, nor criterion of truth, but our observation is, that in circles in which it is recognized, it has a wonderful effect on the purification of both colloquial and written languages.

We *now* think, after carefully "perusing" this tract, that our friend Dr. Toland was decidedly wrong in replying to the first, for which this is an "apology."

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THE *Buffalo Medical Journal*, and *New York Monthly Review*, and *American Medical Monthly*, have become consolidated under the title of the *American Medical Monthly*, edited by J. H. Douglas, M.D., and Austin Flint, Jr., M.D., assisted by E. H. Parker, M.D., of Poughkeepsie, N. Y., and L. H. Steiner, M.D., of Baltimore, Md.

THIS Journal is enlarged to eighty pages, although it was well worth the subscription price (\$3 a year) before. Every body knows that these were excellent journals before consolidation, and there is not the least probability that their aggregate will be less than their former individual merit.

From the London Lancet.

### A Way of Help for the Fallen.

ILLEGITIMACY is unquestionably a painful subject, and one which only a sense of duty can stimulate men to investigate. Of love wronged, faith abused, and trust belied, poets and moralists delight to treat. Our favorite authors abound in the portraiture of such incidents, and in the analysis of the moral and mental changes which precede and follow this unhappy fall. The picture of the wronged and deserted maiden is the most familiar in our literature :

"Heu ! quoties fidem  
Mutatos que deus flebit,"

But if the social investigator take up the inquiry precisely where the poet and moralist have left it, he will find a complete dearth of information. No one has ventured to let in the light upon those obscure and defaced stones of the social fabric which our conventions ignore, and our selfish delicacy thrusts out of sight. But at this day, when social science is prying into all the defects of our civilization, and seeks to discover at once the sufferings and the wants of hitherto unnoticed sections of the population, it were something more than negligent to omit the inspection of the social conditions effecting the welfare of a class into which some forty-four thousand persons are annually born.

A careful and well-wrought paper in the *Journal of the Statistical Society of London* for December, 1859,\* affords an instalment of the information so much needed. This paper is founded on documents furnished by the Registrar General, including amended copies of the notes returned to the department relating to the deaths of illegitimate children under five years of age, during the year 1857. The information was not supplied without considerable trouble and labor voluntarily incurred by the department, and this affords a great claim upon the gratitude of the public in behalf of the courteous and efficient heads of the Registrar General's office, who have so often deserved well of the nation. Some of the figures and deductions are unexpected ; all of them merit attention. Out of 388 illegitimate children who died in 1857, the large proportion of 326 died before they were one year old ; 110 perished between the ages of one month and three months. Few die in the first week. Could the mother nurse the child and gain her livelihood at the same time, we can see no reason why this excessive mortality after the first week should exist. How might this be brought about ? We gather a hint from the table of occupations of the mothers. Of 339 mothers, 194 had been domestic servants ; 33 dress-makers ; 16 trade-workers. Two hundred and forty-three, then, were employed in much-needed industrial occupations. The remedy is with the ladies of England. Would they but help and pity the unfortunates whom at their bidding, society does now but stone, their erring sisters might be reclaimed ; the temptation to desert, the impulse to maltreat, and the necessity to neglect their children, would be removed. Assuredly, infantile mortality would be diminished. Would public morality be injured ? We confidently believe that it is possible in these cases to discourage vice, and yet to show mercy to the fallen. It is a hopeful sign of future amendment in our present social code, that we can bear now to discuss this matter, which a few years since none dare mention. It would not be premature, now, to confer upon the means of affording to these women, fallen

\* Observations on illegitimacy in the London Parishes of St. Marylebone, St. Pancras, and St. George, Southwark, during the year 1837. By William Acton, M.B.S.C., Fellow of the Medical-Chirurgical and Statistical Societies.

in their first fault, an opportunity of redemption in the future and atonement for the past, without compelling them to pass through the protracted purgatory which is at present implied in the proper fostering of their illegitimate offspring. The philanthropists of the day are horror-stricken by the misery of the utterly outcast, and have balm only for the wounds of those already prostrate in the depths of degradation. We would not stay the current of public pity; it flows with but too scanty a stream. But it is possible to arrest many of these women at the very outset of their career. A little help, a little admonition, and a chance of work, during the first few months after the birth of their child, would save many hundreds, it may be thousands, from passing the gulf which it is so hard to bridge across. A simple organization, and a few hundred pounds, would do great things in this work. Each day the return of the parish relieving officer shows where and when a child has been born by an unmarried woman. To seek out that woman then; to speak to her words of warning, rebuke, and help; to offer to her the means of occupation, and a way of living without further degradation — this would be a salutary and a merciful labor. It was in the power of any dozen ladies and gentlemen, with or without a paid officer, to do this in their own parish. And thus the sempstresses, flower-makers, shoe-binders and domestic servants, whose fall is chronicled in the parish books, might be saved from new misery and sin; while the excessive mortality of their children would no longer disgrace our humanity.

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[Continued from last number.]

From the New Orleans Medical and Surgical Journal

### Medical Chronology.

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117. Apollonius of Tyre; Dioscorides Phacas.
100. Arrival of Asclepiades at Rome.
78. Sylla dies of a lousy disease.
68. Themison of Laodicea.
49. Heras of Capadocia Nicon of Agrigentum, disciple of Asclepiades.
44. Titus Aufidius of Sicily.
42. Marcus Artorius; Philonides of Dryachium; Clodius; Niceratus.
31. Death of Marcus Artorius.
30. Iecias at Smyrna; Menodotus; Pasicrates; Nileus.
20. Meges of Sidon; Philo the Jew.
- B. of J. C. Zeuxis of Laodicea.
- A. D. 3-5. Cornelius Celsus.
6. Apulejus Celsus.
14. Eudemus.
23. Birth of Pliny; Menecrates of Zeophleta; Phido of Tarsus; Vettius Valens.
33. Charmis of Marseilles.
37. Servilius Damocrates.
41. Alexander Philalethes; Scribonius Largus.
43. Xenocrates of Aphrodisia.
64. Dioscorides of Anazarba; Andromachus; Thessalus of Tralles; Gaius and Evelpidēs, oculists; Crinas of Marseilles.
68. Athenus of Attalus.
69. Demosthenes Philalethes; Apollonides of Cyprus; Menemachus; Olympicus; Mnaseas; Zoilus.

79. Death of Pliny.
81. Menodotus of Nicomedia; Aretæus of Capadocia; Agathinus; Philomenus; Marinus; Crito; Apollonius Archistrator; Pamphilus; Mimatopoles.
96. Death of Apollonius of Tyana.
97. Archigenes; Rufus of Ephesus; Cassius the Iatrosophist; Soranus, son of Menander; Heliodorus, the Surgeon; Asclepiades Pharmacion; Herodotus.
117. Moschion; Theudas of Laodicea; Artemidorus Capiton; Dioscurides; Lycus of Naples; Philip of Cæsarea; Acibah and Simeon ben Jochai, founders of the Cabala.
131. Birth of Galen.
138. Marcellus of Sida; Andrew Chrysaris; Julien the Methodist.
152. Galen goes to Smyrna.
155. He returns to his country.
165. Galen arrives at Rome.
166. Magnus of Ephesus.
200. Death of Galen.
211. Ammonius Saccas.
222. Serenus Samonicus.
230. Coelius Aurelianus; Leonides of Alexandria.
237. Serenus Samonicus, the Son.
253. Plotinus.
270. Manes, founder of the Manichean Sect.
282. Porphyry.
296. Edict of Dioclesian against Alchymy.
307. Palatine Archiatri; Jamblichus.
330. Antyllus the Surgeon.
337. Zeno of Cyprus.
357. Ordinance of Constantine against magic.
360. Oribasius; Magnus of Antioch.
363. Cæsarius.
364. Vindicien; Posidonius; Philagrius.
367. Edict against magic.
379. Theodore Priscian; Sextus Placitus; Nemesius; Marcellus of Bordeaux; The *Cyranide*.
400. Death of Martin of Tours.
431. First persecution of the Nestorians at Edessa.
440. James Psychrestus.
541. A general plague.
543. Benoit of Nursia, founder of the convent of Monte-Cassino; Aetius of Amida; Alexander of Tralles.
565. Small-pox in France.
572. Small-pox in Arabia.
582. Isidore of Seville.
610. Theophilus Protospatharius.
622. Aaron; Hhareth ebn Kaldath.
634. Palladius the Iatrosophist, Paul of Egina.
640. Stephen of Athens; John of Alexandria.
668. Simeon ben Taibutha, the Nestorian.
671. Aspyrtes of Prussia; Theodore, Archbishop of Canterbury.
680. Masardschawaih; Sergius of Rasain; Gosius of Alexandria.
690. Theodorus and Theodunus, Greek physicians in Irak.
702. Birth of Geber.
772. George Bakhtischwah is called to Bagdad; Asa abou Koreisch.
774. Isa abou Koreisch.
775. Bakhtischwah abou Deschibrail.



804. Hhonain ebu Izhak.
805. Dschibrail Bakhtischwah.
814. Iahiah ebu Batrik.
820. Serapion the elder.
835. Birth of Thabeth ebu Korrak.
846. Bakhtischwah 4th.
865. Death of Jahiah ebu Masamaih.
867. Michel Psellus the elder.
872. Death of Sabor ebn Sahel.
873. Death of Hhonain ebn Izhak.
880. Death of James Alkhendi.
886. Senan ebn Thabeth ; David ebn Hohain ; Hhobaisch.
912. Death of Izhak ebu Hhonain.
923. Death of Rhazes.
936. Theophanes or Nonus ; the Hippitriques are collected.
940. Izhak ben Soliman.
978. Birth of Avicenna.
980. Aladdin al Karschi.
984. Adalheron, Archbishop of Verdun, goes to Salurnum to be cured.
994. Death of Ali ebno'l Abbas
996. Avicenna goes to Dschordschan.
1002. Serapion the younger ; Abdorrahman al Hanisi.
1010. Haroun, son of Izhak of Cordova.
1014. Thieddeg, physician to Boleslas, King of Bohemia.
1017. Death of Mesue the younger.
1028. Fulbert of Chartres.
1036. Death of Avicenna.
1040. Berthier, Abbot of Monte-Cassino.
1054. Nicetas ; Romuald, Bishop of Salernum ; Gariopontus ; Hugh, Abbot of St. Denis.
1071. Desire, Abbot of Monte-Cassino.
1080. Herman, Count of Vehrigen ; Abou-Dschafar.
1087. Death of Constantine the African.
1095. Death of Jahiah, son of Dschala.
1098. Birth of Hildegard, Abbess of Bingen.
1100. *Regimen sanitatis Salernitan* ; John of Milan.
1110. Nicholas, intendant at Salernum.
1114. Birth of Gerard of Cremona.
1122. Death of Khalaf abou'l Kasem ; Synesius.
1131. Mich. Psellus the younger.
1139. Abou Hamed al Ganzali, the philosopher.
1143. Roger gives medical laws to Salernum.
1150. Eros or Trotula ; Lucas, Patriarch of Constantinople, interdicts the practice of medicine to the priests ; Mathew Platearius ; Abou'l Hassan Hebatollah.
1162. First regulations in England relative to bawdy houses.
1164. Death of Ebn-Zohr.
1169. Egide of Cerbeil.
1180. Obizo, Abbot of St. Victoire ; death of Hildegard, Abbess of Bingen.
1187. Death of Gerard of Cremona.
1193. Birth of Albert of Bollstaedt.
1195. Death of Abou Bekrebn Tofail.
1199. Hugh, the physician, professor of medicine at Paris.
1206. Death of Averrhoes ; Aoger of Parma.
1209. The philosophy of Aristotle defended at Paris.
1214. Birth of Roger Bacon.
1220. Faculty of medicine at Montpellier.

(To be continued in next Number.)

# THE Pacific Medical and Surgical Journal.

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## Selections.

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From the New Orleans Medical News and Hospital Gazette.

### Clinical Report of cases Observed at the Charity Hospital.

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THE reports contained in the two preceding numbers of the *Medical News and Hospital Gazette* were written during the progress of the session for 1859-60. This session is now nearly at its close. My recorded clinical observations during the session will supply abundant material for a series of reports, to be continued in successive numbers of the Journal until the commencement of my next term of service. The number of cases of pneumonia treated in my wards, is larger than during the session of 1858-9. These cases will be made the subject of a report so soon as I have leisure to subject them to careful analysis. This report will appear sometime during the summer. My records contain a number of cases of cirrhosis, which I design to analyze when my leisure will permit. For the present and the few succeeding numbers of the Journal, I shall select cases which appear to me to possess particular interest, offering, in connection with the histories, such practical remarks as a review of the histories may suggest.

Writing now, at the close of the session, I desire to express my thanks for the courtesy and co-operation which I have received during the past, or during the previous session, at the hands of the medical officers of the Charity Hospital. Acknowledgements are especially due to my esteemed col-

league's, Drs. Fenner, Choppin, Brickell, and Peniston, for a cordial invitation to make their wards subservient to clinical observation and instruction; also, to Drs. E. J. Coxe, James Burns, J. F. Bell, Charles H. Jordan, and George Purnell, for the same privilege. To the late assistant surgeon of the hospital, Dr. A. W. Smith, I am under many obligations. To the surgeon of the hospital, Dr. J. D. Foster, and the recently elected assistant, Dr. Howell Sprague,, I am indebted for promoting, in every way, my clinical pursuits. The resident students of the hospital have laid me under obligations. I am especially indebted to Mr. Profflet for assisting me in recording cases, and to Mr. now Dr. Henry Stone, and Mr. J. J. Holt, who were assigned successively to my wards, for their valuable aid in the dead house.

I have selected for the present report, a case which may serve as a type of a rare and serious form of pulmonary disease in the adult, viz: *Capillary Bronchitis*.

*Case of Capillary Bronchitis—Death—Post Mortem Appearances.*—John H. H., aged 30, Irishman, laborer, admitted during my morning visit, November 3, 1859. The following is the record made by me an hour after his admission:

The patient is suffering greatly from dyspnœa. The respirations are 40 per minute. The prolabia are somewhat livid. He coughs frequently, and has vomited several times. The matter of expectoration appears to be frothy serum tinged with blood. It presents a peculiar appearance, being thin, not adhesive, frothy, and of a bright, brick-dust red color. It was considerably abundant. It is difficult for him to command breath enough to converse; he can only utter words disconnectedly. The pulse is 140. The skin is cool.

The patient's distress, and the difficulty of utterance, prevent me from obtaining the previous history. I learn that he was in the hospital a fortnight ago with intermittent fever; was discharged after a few days, and again returned on account of a relapse. He was discharged a second time only two days ago. The present distressing pulmonary symptoms came on last night, but he had had some cough previously for several days.

On examination of the chest every where, on both sides, the respiratory murmur is replaced by subcrepitant and sonorous rales.

The sulphate of morphia, gr. ss., was administered directly on his admission an hour ago. He is now somewhat less restless than before this remedy was given. Restlessness was marked at the time of his admission, and is so still, although lessened. The expression is anxious.

10 1-2, A. M.—An hour after the foregoing record was made, the patient reports more comfortable, and is more quiet. He doses, but is easily roused. The symptoms, however, in other respects, are not improved. The respirations are 40, and the pulse 140 per minute. There are some tracheal rales. The lips and tongue are palid and slightly livid, the palor predominating.

The rales over the chest continue. The chest is every where resonant on percussion, except there is slight relative dullness over the lower lobe of the left lung. The rales are more marked in the expiration than in the inspiration. The inspiration is short and spasmodic.

Death occurred at 11 A. M., a little over three hours after his admission.

The thoracic viscera were removed for my inspection, twenty-two hours after death, by Mr. Stone.

The lungs were not collapsed. They were voluminous, like the lungs in cases of emphysema. There was no solidification anywhere. Sanguinolent serum, somewhat frothy, flowed from the cut surface in abundance. The bronchial tubes, traced as far as possible, presented, every where, the mucous membrane deeply reddened. No morbid products within the bronchial tubes. Some of the smaller bronchial tubes appear to be dilated. No tubercle. The heart was normal.

*Remarks on the Seat, Symptoms, Physical Signs, Diagnosis, and Treatment of Capillary Bronchitis. Cardiac Murmur simulating that from Mitral Regurgitation in this Disease. Relations of the disease to Lobular Pneumonia.*—The term *capillary bronchitis*, although an improvement on the *catarrhus senilis*, *peripneumonia notha* and *suffocative catarrh* of the older writers, is a misnomer. It implies that the seat of the inflammation is in the capillary bronchial tubes, which is not correct. The true capillary tubes, in other words, the tubes which ramify within the pulmonary lobules, called also the bronchioles, the terminal branches of the bronchial tree, and the intercellular passages, are affected, together with air cells or vesicles, in pneumonia, but not in capillary bronchitis. The latter is distinguished from ordinary bronchitis by the extension of inflammation into the smaller bronchial subdivisions, but those which take place prior to the ultimate distribution to the lobules. Ordinary bronchitis affects only the primary subdivisions or larger tubes; in the great majority of cases the inflammation has no tendency to extend into the smaller tubes, but in exceptional instances this occurs, and then we have quite a different affection as regards symptoms and danger, for which it would be difficult to find a better name than capillary bronchitis, although this name strictly speaking, is inappropriate.

The reluctance (speaking metaphorically) of bronchial inflammation to pass from the larger to the smaller tubes, furnishes one of the most striking of the many illustrations of conservatism in the natural history of diseases. Ordinary bronchitis is often a trivial, and rarely a serious affection. Capillary bronchitis, on the contrary, when acute, is one of the most fatal of diseases. Grisolle estimates that it carries off one-sixth of adults, and seven-eighths of children attacked by it. Happily, it is an extremely rare affection. During the last five months but four cases have occurred, within my knowledge, at the Charity Hospital. In three of these the disease has ended fatally. But one of these cases occurred in my ward—the case now reported. Cases may have been received which I did not have the opportunity of seeing, but my attention was invited to the important pulmonary affections in the majority of the hospital wards. It is, however, to be borne in mind that the disease affects children much oftener than adults. It has prevailed to some extent among children in the city during the winter, as I learn from those engaged in family practice, and I have seen a few cases in consultation. My impression is, that it occurs more rarely at the North than at the South, both in children and adults, but I have not sufficient data to speak positively on this point. This disease, like some others, affects by preference the two extremes of life; next to children, aged persons are liable to be attacked by it—hence one of the names formerly applied to it was *catarrhus senilis*. Being an exceptional form of bronchitis, it is apt to occur when the latter prevails as an epidemic, *i. e.*, in connection with influenza, at certain times and places. Here we find an illustration of a fact applicable to different diseases, *viz*: variations from their fixed laws are more likely to take place when they prevail as epidemics, than when they are developed sporadically.

The infrequency of capillary bronchitis, when the great frequency of ordinary bronchitis is considered, is a remarkable instance of conservatism, because the mucous membrane lining the smaller tubes does not differ essentially, according to the descriptions of anatomists, from the membrane which lines the larger tubes. The apparent difficulty with which bronchitis eventuates in pneumonia, and *vice versa*, is in a measure explained by the differences in structure between the membranes lining the bronchial tubes on the one hand, and, on the other hand, the bronchioles and air vesicles. Clinical observations shows the existence of a pathological law by which inflammation is often restrained from passing from one anatomical tissue to another, however great their proximity to each other. Thus the chances of laryngitis be-

coming developed in a patient affected with pharyngitis, are exceedingly small, provided the latter affection be not prevalent as an epidemic; so in a primary pleurisy, the inflammation very rarely, if ever, extends beneath the membrane to the pulmonary parenchyma. It is true that the smaller bronchial tubes differ from the larger, in the fibrous membrane being thinner, the cartilaginous plates less numerous, and the muscular fibres more abundant; but the mucous membrane presents the same kind of epithelium in both situations, and it is supplied with branches from the same vessels. The distinction between the two classes of tubes, as respects the extension of inflammation, suggests the inquiry whether there may not be certain anatomical points of difference which have, as yet, escaped the attention of anatomists.

Why is it that capillary bronchitis differs so immensely from ordinary bronchitis in symptoms and danger? Simply because inflammation in the smaller tubes involves obstruction to the passage of air into and from the bronchioles and vesicles of the pulmonary lobules. This obstruction is due to swelling of the membrane and the presence of mucous secretion in the affected tubes. The air cells contain air, perhaps in larger quantity than in health, but the air is imprisoned in the cells, as in asthma, the cause of obstruction being more persisting than spasm of the bronchial muscular fibres, and hence far more serious than the latter. It is a much graver affection than pneumonia affecting an entire lung, or than pleurisy with the pleural sac filled with liquid, because these latter affections, happily, are usually confined to one side—another illustration of conservatism—while bronchitis is one of the symmetrical diseases, *i. e.*, it affects equally parts situated on each side of the median line.

With the physical conditions belonging to this disease distinctly before the mind's eye, and a clear appreciation of the mechanism by which the respiratory function is compromised and life destroyed by it, the symptoms and signs involved in the diagnosis are at once intelligible. Dyspnoea, lividity, restlessness, and anxiety of expression are incident to its suffocative effects. Apnoea is produced precisely as the larynx or trachea is obstructed, the only difference being that the obstruction is near, instead of being remote from, the seat of the function of hæmatosis, *viz*: the air vesicles. The *modus operandi* is the same. It is easy to understand why in capillary bronchitis the respiration should be frequent in proportion to the obstruction, while the respirations are slow and prolonged when the larynx or trachea is obstructed. In the latter case, the difficulty is in the passage of air into and from the bronchial tubes; in the former case, the air enters and escapes from the larger tubes without difficulty, the obstacle being in the smaller branches of the bronchial tree.

The presence of air in pulmonary vesicles, even in larger quantity than in health, accounts for the resonance on percussion being as well marked, or more so, as the normal sonorousness. The bronchial obstruction renders it plain that the normal vesicular murmur must be weakened or suppressed. The narrowing of the smaller tubes and the mucous which they contain, are represented by the dry, vibratory, high-pitched, or sibilant rales, and by the fine, moist, or subcrepitan: rales. Unequal conditions of the two lungs, as regards dilatation of the cells and pulmonary congestion, may give rise to a slight difference in the percussion resonance, as in the case reported in connection with these remarks. It is true that a paroxysm of asthma presents in combination most of the signs and symptoms just mentioned. Aside from a knowledge of the liability to asthmatic paroxysms in most of the cases coming under observation, the differential diagnosis may be based on the frequency of the respirations in capillary bronchitis, and the great frequency of the pulse, indicative of an acute inflammation. In asthma the respirations, although equally labored, are less frequent, the expiratory act being notably prolonged, and the pulse rarely denotes symptomatic febrile movement. The

subcrepitant rale is rarely present in asthma to the extent commonly observed in cases of capillary bronchitis. The subcrepitant rale predominates in the latter affection, and the dry, whistling rales predominate in asthma. However, capillary bronchitis, in a great majority of instances, is observed in children, while asthma is seldom developed before adult age.

It is a trite remark to say that the most important question connected with the study of so serious a disease as capillary bronchi is is, how is it to be most judiciously managed? It is equally superfluous to say that, with reference to a rational answer to this question, the intrinsic tendency of the disease to death or recovery, the source of suffering and danger—in short, the pathology of the disease is to be clearly understood. Clinical observation shows that the disease, under different modes of treatment, often runs a fatal career with great rapidity, destroying life sometimes as quickly as laryngitis and œdema glottidis, and more surely, because we have not the surgical expedient, as in the latter affections, of letting in air to the pulmonary cells below the seat of the obstruction. Can we expect to prevent apnoea by any special plan of medication, when there exists an amount of obstruction incompatible with the continuance of life? It is to be feared that this question must be answered in the negative. Recovery under these circumstances requires that the tumefaction of the membrane shall subside, and the products of the inflammation contained in the tubes removed by expectoration. We have no means of effecting these objects, certainly, without delay, and, therefore, when these physical conditions have attained to a degree incompatible with life, death is inevitable. The grand object of treatment, then, is to prevent, if possible, the occurrence of fatal obstruction. How is this to be done? In general terms, by the measures which tend to diminish and arrest the progress of acute inflammation. To consider these measures would be to enter on a wide field of discussion comprising questions relating to blood-letting, mercurialization, opium, counter-irritation, etc. Suffice it to say that, in an inflammation like this, which kills, not because its intensity or extent overwhelms the powers of life, as does peritonitis, for example, and not because it leads to incurable structural lesions of an organ essential to life, but merely because, from its situation, its ordinary results constitute an obstacle to the supply of atmospheric air for the aeration of the blood, the prompt and efficient employment of therapeutical measures, within the limits of a due regard to the vital powers, is all important. The latter qualification is less imperative in this affection than in some others; yet, it is to be borne in mind that when the blood begins to suffer from deficient aeration, the small probability of recovery which remains, rests on the vital powers being sustained, so that the patient may struggle on to the period when, in the natural course of the disease, the obstruction will cease.

The importance of an early diagnosis in this disease can hardly be overestimated. The prospect of being able, by judicious treatment, to prevent the occurrence of fatal obstruction, is far better than the prospect of affording relief when the obstruction already exists in a dangerous degree. Ordinary bronchitis, especially in children, at seasons when cases of the capillary form have been known to occur, claims more than ordinary care and precaution in the management, in view of the liability of an extension of the inflammation to the smaller tubes.

A case of capillary bronchitis, included in a series of cases reported by my friend and colleague, Prof. Brickell, for the February number of the *Medical News and Hospital Gazette*, presented a loud, cardiac murmur, systolic, its maximum of intensity just below the sternum, but so loud as to be propagated over the entire præcordia. This murmur was developed during the progress of the disease. I did not think that such a murmur could exist without valvular lesions, and I expected, after death, to find the mitral valve insufficient. Prof. B., from having observed a similar murmur, under similar

circumstances, in another case, expressed doubt as to the existence of valvular lesions. At the autopsy, the heart was, to all appearance, healthy, the mitral valves seeming to be sufficient. This is the first instance in which it has occurred to me to observe such a well-marked murmur at the apex or inferior border of the heart, without lesions. The foramen ovale was closed in this case, and the heart contained no *ante mortem* clots. Since this case was observed I have met with the following remark by Dr. Barlow, in a paper contained in Guy's Hospital Reports (3d series, vol. v, 1859, p. 345 :) "Whereas I do not hesitate to say that other forms of pulmonic obstruction, as, for example, long-continued capillary bronchitis, may present all the symptoms of diseased mitral valve, murmur inclusive." Dr. Barlow offers no explanation of the occurrence of murmur under such circumstances. In the case reported by Prof. Brickell, the capillary bronchitis was long continued, the patient presenting strongly-marked cyanosis for two or three weeks before death. The most rational explanation of the development of the murmur seems to me to be afforded by the supposition that, in consequence of distension of the cavities of the right side of the heart, free tricuspid regurgitation occurs, and it is this regurgitant current which gives rise to the murmur. It is an interesting point for further clinical observation, to ascertain how frequently a cardiac murmur takes place in the course of capillary bronchitis. And the occurrence of a murmur in a certain proportion of cases, without valvular or other organic lesions, is a fact highly important in connection with the diagnosis of structural affections of the heart.

The pathological relations of capillary bronchitis to the affection known as lobular pneumonia, form an interesting subject for clinical study. I can scarcely do more than allude to it in this article. The existence of such a disease as lobular pneumonia may fairly be doubted. In most of the cases, at least of the affection so called, the solidified nodules scattered here and there throughout the pulmonary organs, consists of lobules collapsed in consequence of obstruction caused by mucous plugs, which interfere with the inspired, but not with the expired current of air. Without discussing the mechanism further at the present time, I will give the following account of the morbid appearances in a case which presented, during life, the phenomena of capillary bronchitis.

The patient was a girl aged fourteen, who was admitted into Prof. Brickell's ward, and died twenty-four hours after admission. My examination of the case was very brief. The respirations were extremely frequent, and the lips livid. The subcrepitant rale was everywhere present over the chest.

The body was assigned to the College for dissection, and I had an opportunity of inspecting the lungs. Their volume was small, and portions here and there were carnified. On making sections and squeezing the lung near the cut surfaces, frothy serum escaped from circumscribed portions, and serum without air from other portions. On inflation prior to section, portions of each lobe were distended to an emphysematous degree, and other portions remained undistended. The inflation, however, was somewhat imperfect, owing to the organ having been slightly wounded. There was no appearance of exudation within the cells anywhere, and no pleuritis. The bronchial mucous membrane was reddened as far as the tubes could be traced.

These morbid appearances were supposed to denote capillary bronchitis with collapsed lobules.

Subacute or chronic capillary bronchitis has important pathological relations to emphysema and asthma. But as these remarks have already extended much further than I had intended, and, as I fear, far enough to have wearied the patience of the reader, I need not apologize for bringing them to a close.

*New Orleans, March 20, 1860.*

From the Philadelphia American Journal of the Medical Sciences.  
**On Possible Ultimate Causes of Disease.**

BY M. C. LEA, ESQ.

THERE are, perhaps, few branches of medical science which are surrounded by so many difficulties, or in which so little has been accomplished, as the investigation of the ultimate causes of disease. The subject offers a wide field for study, which would no doubt well reward the time and labor which might be expended upon it. Raspail, in spite of his eccentricities, made some curious and ingenious observations and suggestions, though he doubtless erred in looking too far for his causes, and referring too much to remote and insufficient agents, such as inhalation of sporules, seeds, &c., and ingestion of particles acting hurtfully by mechanical agencies and other similar accidents. Those to which it is here proposed to refer, are in their nature obscure and difficult of recognition, but of sufficient gravity to explain all the effects which may be supposed to arise from them.

It is possible that there may exist abnormal states of the system, in consequence of which the digestion of certain aliments may take place in an abnormal manner. It is not here intended to refer to indigestion, which in many cases may even be a wholesome and beneficial effort of nature to prevent the assimilation of a particular kind of food which the actual condition of the body may render injurious, but to an action of a very different character. Food which may in normal conditions of the body yield products of digestion of the most nutritious and wholesome character, might equally, in certain unfavorable conditions of the digestive system, yield more or less active poison, which, though generated even in very small quantity, may gradually go on with a slowly increasing toxic effect until the whole system is disordered by it. Disordered digestive functions of this kind may perhaps be the key to many of those inexplicable changes of health, in which the system is gradually broken down without any visible cause.

One or two examples will be sufficient to illustrate the author's meaning, it not being his intention to enter upon speculations belonging less to chemistry than to chemical physiology, but rather to suggest how much invaluable information might be obtained by subjecting parts of the body after death by disease to a rigid chemical analysis with a view to detect the presence of poisonous substances generated in the body itself out of aliments innocuous in a normal condition of the functions of digestion.

*Butyric Acid.*—This acid is an active poison. M. Isidore Pierre\* mentions a case reported to the agricultural society of Caen, in which a number of horses had suffered severely by drinking water out of a certain pool, two of the number having died in consequence. The analysis of the water of this pool, which was in the neighborhood of a farmyard, proved the existence of butyric acid in a saline form in it, and other similar cases were ascertained. No other substance could be detected in the water which could have had a poisonous effect upon the animals. Some cider which had proved very injurious to the health of those who had used it, was found on examination by M. Pierre to contain considerable quantities of butyric acid, but no other substance to which the bad effects could be ascribed.

There is no reason to doubt that butyric acid might, under abnormal circumstances, be produced in the body in considerable quantity. Many sub-

\*Comptes Rendus, Aug. 22, 1859. Ext. Chem. Gaz., Dec. 1859.



stances which, under normal digestive functions may be favorably assimilated, might in peculiar states of the body, scarcely amounting in themselves to absolute disease, be converted into butyric acid, which, according to Leopold Gmelin, is produced under the following circumstances :—

Starch and sugar, in contact with proteine substances, are gradually converted into butyric acid, with or without previous conversion into lactic acid. Grape sugar in solution, which does not of itself ferment, may be made to do so by immersion of bits of paper previously exhausted by chlorhydric acid and water, with production of butyric acid. The residue from the manufacture of potato starch, which contains considerable quantities of starch, if mixed with small quantities of animal matter, undergoes fermentation in two or three days, with production of butyric acid. Large quantities of the same acid are formed when starch remains in contact with animal matters for a few days, and under other circumstances which might occur in the human system.

In confirmation of this view, it may be mentioned that butyric acid has actually been detected in the gastric juice, and in the matter from a cancer in the stomach. Butyric acid may even be in very small quantity an occasional or even normal constituent of certain parts of the body. But under unfavorable conditions of the digestive functions it may easily be produced in sufficient quantity to exercise a noxious influence on the organism.

Butyric acid is in all these cases an oxidation product, as is proved by the fact that the same substances, starch, sugar, gluten, &c., yield it by treatment with nitric acid, sulphuric acid and peroxide of manganese, or chromic acid. If, therefore, it could be demonstrated that any particular form of disease was occasioned by the presence of butyric acid, such disease might no doubt be successfully combated by deoxidizing agents, such as sulphur baths.

**Cyanogen Compounds.**—Animal matters decomposed by heat in the presence of fixed alkalis give rise to cyanogen compounds. The waste nitrogen of the system is chiefly eliminated as urea, isomeric with cyanate of ammonia. Under abnormal conditions of the functions active cyanogen compounds might be generated instead of the comparatively inert urea. As sulphocyanhydric acid appears to be in very small quantities a normal product of the digestive functions, which may easily be seen by the action of a ferric salt upon the saliva,\* it is by no means impossible that under favorable circumstances larger quantities of this acid might be generated. Upon the animal organism it acts, like cyanhydric acid, as a narcotic poison.

**Formic Acid**—This acid is capable of being formed, under favorable circumstances, by a very large proportion of the substances which we use as food. Starch, sugar, gum, casein, fibrin, albumen, all yield it by the action of oxidizing substances, in most cases by treatment with sulphuric acid alone. That such a reaction is capable of taking place in the system is proved by the fact that the presence of formic acid has been detected in chopped human flesh. Should circumstances arise to give undue activity to the functions which produce it, the materials are everywhere most abundantly present in the system for the production of this highly poisonous acid.

Not only substances taken as food may, under peculiar circumstances, be converted into poison, but medicines administered may, by peculiar and unusual decompositions, be converted from substances comparatively innocuous into dangerous poisons. Thus calomel may, possibly, at times, under the influence of the free chlorhydric acid of the stomach, give rise to the production of a certain quantity of corrosive sublimate. In the experiments of

\*This very remarkable fact first observed by Previanus, and examined by Gmelin, may be rendered very evident in the following manner: Place in the bottom of each of two test glasses, two or three drops of acid solution of ferric chloride of iron, and add to the one a teaspoonful of water, to the other an equal quantity of saliva. Even with so small a quantity of saliva the reaction is perfectly distinct, causing the ferric solution to assume the color of sherry wine, while that diluted with water becomes almost colorless.

Mialhe, quoted by L. Gmelin, calomel exposed to the action of free chlorhydric acid was converted in the proportion of from two to three per cent to protochloride. This may perhaps explain the unexpected effects at times produced by the administration of that medicine. Chloroform might, by the substitution of oxygen for chlorine and taking up an atom of water, be converted into formic acid, the hydrated tetroxide of the radical of which chloroform is the tetrachloride. This change actually takes place by the effect of the presence of potash. *Assafoetida*, under chemical influences, yields formic acid.

With respect to the production of poisonous substances by the abnormal digestion of food, much light might be thrown upon the nature of certain obscure diseases by the careful analysis of the gastric juice and other secretions during the continuance of morbid influences.

The phenomena here referred to, as possibly existing in certain cases, are not to be confounded with those well recognized cases in which certain substances not particularly noxious in themselves, as, for instance, uric acid and urate of soda, create and sustain disease by obstruction. In these cases the amount of poisonous substance present is large, and could not well be overlooked. On the other hand, the author suggests the possibility that the production of certain active poisons, which may be naturally present in the system in very small quantity without injury, may be so far increased by the abnormal action of the functions of digestion as to occasion chronic or acute diseases.

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**TREATMENT OF BLENNORRHAGIA BY VINUM COLCHICI AND TINCTURE OF OPIUM.**—Dr. Eisenmann, of Wurzburg, states that he once had occasion to prescribe a combination of vinum colchici and tincture of opium for an officer affected with rheumatic conjunctivitis, and a few days afterwards he was informed that the medicine had cured not only the ophthalmia, but also a blennorrhagia, of which no mention had been previously made. He was surprised at this result; but he resolved to profit by it, and to try the same treatment in other cases. He therefore prescribed the medicine for a girl affected with blennorrhagia, and was again surprised that a permanent cure was effected in a few days. Nothing was ordered externally, except frequent applications of tepid water. Subsequently, several cases of blennorrhagia in the male presented themselves, and were treated in the same manner. The dose employed was eighteen to twenty drops, three times a day, of a mixture consisting of twelve grammes of vinum colchici with two grammes of tincture of opium: milk was ordered as the principal article of food, and absolute rest was enjoined. All the cases of blennorrhagia thus treated were cured without exception in a few days, especially when the treatment could be adopted at the commencement of the affection, and none resisted longer than a week. The observations of Dr. Eisenmann have been confirmed by those of M. Collin, of Dresden, who treated ten cases of blennorrhagia with the greatest success by the mixture of vinum colchici and laudanum. The patients did not recover so rapidly as those treated by Dr. Eisenmann; but the latter physician attributes the difference to the probable inferiority of the drugs employed, and to the fact that the patients did not consult a medical man at a sufficiently early period.—*B. and F. Med.-Chirurg. Rev.*, Jan. 1860, from *Bull. Gen. de Therapeutique*, May 15, 1859.

From the Philadelphia American Journal of the Medical Sciences.

### Tracheotomy in Croup.

THE number of the *Edinburgh Medical Journal* for February last contains an interesting paper, by Mr. James Spence, on this subject, in which he advocates the propriety of the operation in extreme cases, as not only warrantable, but as giving the patient the only chance of life.

He states that out of thirteen cases of croup in which he has operated in the last suffocative stage, six have been saved; and that in cases which subsequently proved fatal, great immediate relief from the agonies of suffocation was afforded. Moreover, he states "that out of the seven fatal cases, one was laboring under the sequelæ of scarlet fever of a severe character, and was completely relieved as regarded the breathing, but sank from persistent vomiting and emaciation; another, F. S., was an acute case of croup supervening on congestive scarlatina with cynanche maligna; in a third, the disease appeared in the progress of measles, also of a congestive character; and a fourth was a child only recently recovered from a severe attack of scarlatina. Now, whilst I would not like to exclude even such cases from the benefit of the temporary relief and the chance of life which tracheotomy affords, still it is evident that the chance in such cases is very much less than in uncomplicated croup, and that the result of such cases must tend unduly to reduce the average success of the operation."

"Tracheotomy," he adds, "cannot, indeed, be expected to be so successful in croup as when performed in œdema glottidis or ulceration of the larynx, or even as in acute laryngitis of adults, because in many cases of croup there is a tendency in the diseased action to spread downwards; on the other hand, what I have observed both as regards the invasion and progress of the disease as shown by the symptoms, and more especially from observation and experience derived from cases in which I have operated, I feel convinced that in many cases of croup the disease is more confined to the larynx than is generally supposed, and that, when it spreads, it does so from the larynx downwards, and does not attack the mucous membrane of the trachea simultaneously with the larynx, or, as some would have us believe, attack the trachea and bronchial mucous surface before affecting the larynx. Post-mortem examinations reveal to us the completed disease, not its progress—that must be derived from observation of phenomena during life; now, to say nothing of the ordinary progress of the symptoms, the immediate relief afforded by the operation in all cases, even in those which subsequently terminated fatally, shows conclusively that even in the fatal cases no disease of the lower part of the trachea could have existed at the time; otherwise the operation could not have afforded the relief it did. As to the presence of bronchitis being a contra-indication to the performance of the operation—a point which I was inclined to insist on in my former communication, though I would not go so far as some continental surgeons, who consider it absolutely favorable—I must modify my former opinion, inasmuch as in most of the successful cases it was present, and when the tube was properly managed the mucus was easily expectorated; and perhaps it may be considered favorable in one sense, as indicating a condition of the mucous membrane less predisposed to the formation of plastic exudations."

With regard to the question of operating at an early stage, Mr. S. says: "It has been plausibly urged, that the success of the operation would be greatly increased if it were performed before the symptoms became very urgent. So far as I can judge from the reports of the discussion in the Academy of Medicine, M. Trousseau's doctrine is to operate as early in the second

stage of the disease as possible, when the presence of false membrane or exudation is ascertained from the suppressed and less frequent coughs, the fits of dyspnoea, with intervals of perfect quietude. Now, recoveries by the use of other remedies in this stage, though rare, are not so rare as to entitle us to urge an operation not free from danger in itself, unless we are prepared to show some good grounds for believing that by early operation we could greatly increase the chance of success: 1st. By early relief of the dyspnoea preventing the bad effects of the gradually increasing imperfect aeration of the blood, local pulmonary congestion, or emphysema; or, 2d. By preventing the extension of the membranous or plastic exudation downwards. The former of these indications, I believe, would be met by early operation; the second, and more formidable, I doubt, would not; for the cases I have operated on show that in certain cases the tendency to tracheal and bronchial exudation continues to spread downwards after the operation has afforded a period of relief, if it be not even increased by the presence of the tube. The late Mr. Liston used to object to tracheotomy in croup, on the ground that, if we operated early, there was no physical obstruction to the breathing to warrant it, and that if we delayed till the symptoms were urgent, the tracheal exudation rendered the operation useless. To neither of these propositions can I assent; but I think we are hardly warranted in operating till all remedies have been actively tried and no other chance remains; then there should be no delay. Here, as in many cases, the period of the disease, as regards time, is no criterion. If, in a case of croup, depletion, the warm bath, emetics, counter-irritation, calomel, and other remedies have been actively used without relief—if the hard, ringing cough has become suppressed, and the respiration is evidently imperfect, as shown by the contracted and depressed appearance of the cartilages of the ribs and occasional severe paroxysms of dyspnoea—for my own part, I would say that the operation is fully warranted. When the paroxysms become more and more frequent, and when the dyspnoea is rather persistent than paroxysmal, with turgid or pale lividity, the operation is the little sufferer's only chance for life."

Mr. S. believes that success depends a good deal on the manner in which tracheotomy is performed, and he gives the following directions:—

"There ought to be no attempt at rapidity or brilliancy in this operation; every step should be methodically gone about. First, as regards the position of the infant, the shoulders should be well raised, the head bent moderately backwards and supported by an assistant, who should pass one arm under the pillow behind the neck, so as it were to project or support it forwards, whilst with the other hand he keeps the head fixed with the chin in the middle line as a guide to the surgeon; the arms and legs may be controlled by a small sheet or large towel pinned round the body, the arms placed by the side; and when thus secured, one person can control the movements: care should be taken to see that the teeth are not firmly closed, but that the mouth be partially open and the nostrils kept free.

"The external incision should begin over the cricoid cartilage, and extend downwards exactly in the middle line for at least two inches. In general, two large veins, one on either side of the mesial line and close to it, are seen when the skin is divided; the fascial texture between these, corresponding to the intermuscular line, is readily divided by the point of the knife, and then these veins can be easily drawn aside. Sometimes one crosses the line to join the other, and is embarrassing, and may even require to be divided after being secured by ligatures. But the point most to be attended to is caution after separating the tracheal muscles. If the finger be placed deep in the wound at this stage, the trachea is felt pretty distinctly, and may seem so distinct as to warrant the surgeon entering the bistoury to divide the rings; but I hold this ought not to be done, because not only may there be the substance of the thymus gland flattened under the finger, but deeper, and pass-

ing from that gland to the thyroid, there exist numerous vessels which would bleed profusely. I have more than once pointed out this to the gentlemen assisting me at my operations. After separating the lobes of the thymus gland, even after these vessels and the thymus are pushed aside, I clear the rings of the trachea with the knife from loose cellular tissue, so that there may be no obstruction to the entrance of the silver tube when the opening is made in the trachea. On the tube being introduced, the head should be bent slightly forwards.

"The form of the tube itself is important: it ought to be of such a size as will admit air freely without over-distending the trachea, and always double; the inner tube fitting pretty close, but not secured to the outer, either by spring or other fastening, so that it may be easily removed for cleaning, or expelled by the efforts of coughing, if obstructed by mucus.

"In the after-treatment, when there is much bronchial effusion, the use of emetics is very beneficial; but under no circumstances would I now resort to antimony, for its effects are most dangerous, as diminishing the expulsive power, and depressing the patient, inducing sinking. I am glad that my opinion on this head is strengthened by the high authority and great experience of M. Trousseau. In all respects, I find ipecacuan answer better as an emetic, without depressing or leading to dysenteric purging, whilst it induces moderate diaphoresis and allays the febrile condition. M. Trousseau is very decidedly opposed to the use of blisters in these cases, on account of the sloughing which follows. But in this respect I cannot so fully concur; for though I would be far from advocating the use of the ordinary fly-blisters, still I have found the application of the liquid blister highly useful in some cases of bronchial complication, and when carefully attended to, I have never seen any bad results.

"In regard to diet, in many cases it is necessary to give beef-tea and wine from the first; but in general I prefer for the first day or two a nutrient non-stimulating diet, such as milk and farinaceous food, and afterwards gradually giving animal food; but in respect to this we must be guided by the condition of each individual patient."

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**SACCHARINE FUNCTION OF THE LIVER.**—Dr. George Harley, in a paper read before the Royal Society (Feb. 2, 1860,) related a number of experiments which he performed, in concert with Prof. Sharpey, in the Physiological Laboratory at University College. The results of these experiments do not in any way countenance the notion that sugar is not produced in the healthy animal body; but, on the contrary, such conclusions as they afford are altogether in favor of the following generally received views upon the subject: 1. Sugar is a normal constituent of the blood of the general circulation. 2. The portal blood of an animal fed on *mixed* diet contains sugar. 3. The portal blood of a *fasting* animal, as well as of an animal fed solely on *flesh*, is devoid of sugar. 4. The livers of healthy dogs contain sugar, whether their diet be animal or vegetable. 5. Under favorable circumstances, and with proper precautions, saccharine matter may be found in the liver of an animal (a dog) after three entire days' rigid fasting. 6. The sugar found in the bodies of animals fed on *mixed* diet is partly derived directly from the food, partly formed in the liver. 7. The livers of animals restricted to flesh diet possess the power of forming glucogene, which glucogene is, at least in part, transformed into sugar in the liver. 8. As sugar is found in the liver at the moment of death (even when the plan of freezing it has been strictly attended to,) its presence cannot properly be ascribed to a post-mortem change, but it is to be regarded as the result of a natural condition.—*Medical Times and Gaz.*, Feb. 11, 1860.

From the Philadelphia American Journal of the Medical Sciences.

### Antiphlogistic Powers of Morphia.

DR. Z. Laurence relates (*Med. Times and Gaz.*, Dec. 31, 1859,) several cases of scleritis and of iritis, treated by morphia.

These cases he considers "establish an important practical fact, viz., that morphia is *per se* a powerful antiphlogistic,\* capable of curing these acute inflammations of the eye, in which up to the present time bloodletting, blistering, and mercurialization have been considered necessary. As regards loss of blood, all will be agreed on the propriety of dispensing with it, where it can be done so with safety. Again, how constant an occurrence is it to see paroxysms of acute inflammations for a time apparently relieved by bloodletting, till the subsequent vascular reaction sets in, but to recur again and again, and require as many repetitions of this same objectionable remedy. I would further ask surgeons and physicians, what evidence have they that in the combination of mercury and opium given with a view of 'putting the patient under the influence of mercury,' as it is termed, it is not really the *opium* which does the good, and that the mercury and its action on the mouth may not be, to say the least, useless?† And I would finally ask the physicians of this country to test the powers of morphia in the treatment of the acute inflammations of the internal organs of the body."

"If we seek for an explanation," says Mr. L., "of the above very remarkable action of morphia, in reducing abnormal fulness of the vessels of the sclerotic, we may find it in the relations of pain to vascular congestion. Pain has generally been regarded rather as the effect, than as the cause of the repletion of bloodvessels; but it is quite an open question, whether or not in certain classes of cases the order of things may not be inverted? Such may be the case in the inflammations of the sclerotic, we have just been discussing. That, on the other hand, vascular congestion may react as a cause of pain, is not improbable. The theory I would submit is, that the action of morphia in these cases depends on its known power of reducing nervous irritability, which may be viewed as the primary cause of the inflammation. In these deep-seated inflammations of the eye this view is very much borne out by the seat of the pain; this will be found to follow strictly the branches of the fifth nerve; indeed, the precision with which the patients themselves localize the pain is very remarkable, whilst we have further evidence of the nervous nature of these cases in the intense watering of the eye (dependent on irritation of the lachrymal branch of the fifth nerve.) In this way I conceive the irritation is propagated to the vessels through the intervention of the connections existing between the fifth and sympathetic nerves."

[We cannot doubt the beneficial influence of morphia in some cases of inflammation of the eye, especially those attended with severe pain, but we must be cautious not to generalize too far, as Mr. L. seems to us to have done. One of the cases related by Mr. L. illustrates this, for in it (a case of scleritis,) morphia entirely failed to afford relief, and the patient was subsequently cured by leeches, blisters, and mercurialization.]

\*In all the cases mentioned, the patients had been using warm fomentations to the eyes before applying at the hospital.

†Again, mercury is presumed to have an "absorbing power" over plastic effusions, such as occur in acute iritis: here, too, it is a fair question whether the absorption of the inflammatory exudations is not rather a natural process, supervening on the cessation of the inflammation (such as we daily see in the absorption of divided cataracts, after the operation by solution, as soon as the inflammatory consequences of the operation have passed off,) than any, if I may be allowed the expression, "mercurial" process?

From the New York American Medical Gazette.

## Answers to Queries of the Ohio Medical and Surgical Journal.

1. Q.—What institutions have we that are out of the *formative* stage?  
A.—The Universities of Pennsylvania, New York, Nashville, etc.
2. Q.—Who are our authors that have attempted anything more than *compilation*?  
A.—Drs. Rush, Davidge, Godman, Meigs, Drake, Hosack, Caldwell, Hare, Bell, Draper, Gross, Dunglison, Dalton, Tully, Stille, Hamilton, etc., etc.
3. Q.—What have we *discovered* in *Materia Medica*?  
A.—Lupuline, Ergot, E herization, Veratrum Viride, etc., etc.
4. Q.—What in Chemistry?  
A.—Hydro-oxygen Blow-pipe, Daguerreotyping and Photography; and last, not least, the Magnetic Telegraph.
5. Q.—What in Anatomy?  
A.—Wallace's and Horner's Muscles, etc.
6. Q.—What in Physiology?  
A.—Much every way; see Dunglison, Dalton, Draper, Dowler, Campbell, Isaacs, etc.
7. Q.—What operations have been originated in Surgery?  
A.—Dr. V. Mott has performed operations never attempted before; and so, also, Drs. W. Post, Stevens, Buck, Mussey, McClellan, Physick, N. R. Smith, McDowell, Atlee, Mutter, Warren, Hayward, Sims, Pancoast, Carnochan, Parker, Peaslee, Crosby, Knight, W. Stone, etc.; all of whom have "originated" operations.
8. Q.—What new disease described?  
A.—There is "nothing new under the sun."
9. Q.—What improvements in treatment?  
A.—Innumerable improvements have been made by American physicians in every department of the healing art, conceded to be such by all Europe, and adopted in the most enlightened transatlantic nations. We have no room for enumeration, and yet to affect ignorance in relation to many of these, is self-stultification. We need only name Dr. Stearns, in Protracted Parturition; Dr. Carnochan, in Elephantiasis; Dr. H. Green, in Throat Diseases; Dr. Sims, in Fistula of the Vesico-Vaginal and Rectal Walls, etc., etc., etc.
10. Q.—What contributions from American chemists?  
A. This is already answered in part; but Drs. De Butts, Hare, Henry, Siliman, Jackson, Draper, Torrey, and Doremus, have all made contributions to this department of great value, which "not to know is to be yourself unknown."
11. Q.—What from American microscopists?  
A.—The science is yet in its infancy, but nowhere has it more ardent cultivators than in America, or more successful manipulators; while in the manufacture of instruments we excel the world.
12. Q.—Are our surgical or obstetrical instruments superior to those of the Saracens?  
A.—Yes, infinitely; and many of them are adopted or imitated at this day in Great Britain, France, and Germany.
13. Q.—Do we treat phlegmasia or fever more successfully or philosophically than did Hippocrates?  
A.—Yes, either and both, more scientifically, and more successfully. A thousand times yes; and nobody knows it better than the querist.

14. Q.—Do we know anything more of cancer than did Rhazes?

A.—Yes, we excel him in its diagnosis—in our knowledge of its history—in our observation of its varieties—in our experience of the worthlessness of his treatment—and in the certainty of our prognosis, founded upon pathognomonic data. Hence “our surgeons” have “improved” on the rules of this “eminent” Arabian, as regards “interference.”

IS SECONDARY SYPHILIS INOCULABLE?—M. Gayenot of Paris, communicates to the *Gazette Hebdomadaire*, some observations and cases illustrating this interesting and important subject, namely, the transmission of secondary syphilis by vaccination. The following cases were sent to M. Gayenot:—

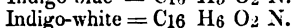
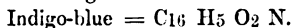
CASE I.—On the 4th of May, 1858, a man 25 years old, belonging to the First Regiment of Naval Infantry, was subjected to revaccination, prescribed by the regulations; three punctures were made on each arm. The vaccine virus had been furnished by good pustules taken from the arm of another soldier, who had, three months previously, an indurated chancre on the penis, which fact was discovered only by subsequent disclosures.

Examined, eight days afterwards, the pustules were found to have aborted; one of them became inflamed, a little later, and became the seat of an ulceration which gradually assumed all the characters of an indurated chancre; its base was hard to the touch, a multiple adenopathy (affections of several glands) made its appearance in the armpit of the same side. Later still, constitutional symptoms, indicated by syphilitic eruptions, made their appearance, which left the matter no longer in doubt.

CASE II.—Another, aged 25 years, was also revaccinated, on the 4th of May, with virus taken from the same source. The same phenomena, entirely similar to those already described, were observed in the patient; punctures aborted, ulceration in the site of one of them, gradually extending, burrowing, hardening, and accompanied by multiple engorgement of the axillary ganglions; then, after a time, general symptoms, such as syphilitic eruptions, in a word, confirmed pox.

A NEW TEST FOR GRAPE AND FRUIT-SUGAR, BY DR. E. MULDER.—The author uses a solution of indigo in sulphuric acid, to which an excess of carbonate of potassa or soda has been added, the latter exercising no effect, even by boiling, upon the indigo solution; but when this mixture comes in contact with grape-sugar, its blue color (especially upon heating) is destroyed; whilst cane-sugar, even at an elevated temperature, causes no change.—*Chemisches Centralblatt*, Dec., 1859.

This reaction depends upon the formation of indigo white, or colorless indigo, produced by the reducing agency of grape-sugar in the presence of free alkali, according to the following scheme:



We can recommend this test, having for many years past employed a method based upon this principle, for analyzing commercial indigo; the weighed and pulverized pigment being boiled in a flask, with a mixture of grape-sugar, alcohol, and liquor potassa or soda; when upon letting the boiled mass stand from twenty-four to thirty-six hours, a deposit of the pure indigo-blue subsides, which is collected upon a weighed filter, dried, reweighed, burned, and the amount of ashes left deducted.



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From the New York Medical Press.

### **Hypophosphites in some Conditions of Disease in Young Children.**

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BY O. C. GIBBS, M.D., FREWSEBURG, N. Y.

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NOVEMBER 15th, 1859, we were called to see a female child, aged 11 months. The child was of a decidedly scrofulous habit, had from the first few weeks of life been troubled with scrofulous sores and cutaneous eruptions: but at present it was suffering from an attack of pneumonia. The general and physical symptoms were all well marked. We ordered syrup of ipecacuanha, spirits of nitre, and paregoric in appropriate doses for internal remedies, and applied mustard to the chest. The patient was closely watched, yet the symptoms gradually increased in severity. On the third day, syrups ipecac. and liquorice were given in combination, and powders composed of Dover's powder, quinine, and small doses of the chalk and the mercury mixture were added to the treatment. The symptoms still increased in severity; though the skin was moist, the cough was troublesome, the pulse very frequent, from 130 to 140, and unpleasant head symptoms began to manifest themselves. The ipecacuanha was abandoned, and the iodide of potassium was substituted, and wine or brandy was soon superadded to the treatment. In spite of treatment, great prostration came on, the pulse was very feeble, and so frequent as to be with difficulty counted. The patient was seemingly unconscious of all surrounding objects, a constant moaning was kept up, the arms were constantly waving the air, muscular spasms were occasionally observed, and the eyes were either strongly drawn to one side, or strabismus was added to the list of ominous symptoms. The eyes were generally open, yet at times there was no evidence of seeing. The pupils were sometimes greatly dilated, and at others as preternaturally contracted. The pectoral symptoms were upon the decline, the cough was less, and the physical signs gave evidence of an abatement of the original disease; yet all hopes of a favorable issue grew less day by day. A blister was applied over the cervical region of the spine, and croton oil applied over such places as had been the more common sites of the former cutaneous disease, with the hope of establishing an eruption not unlike that which for two or three weeks had passed away. Iodide of potassium, quinine, small and frequently repeated doses of opium for its stimulating effect were continued, and milk punch and beef tea were administered liberally.

On the evening of the 23d, the eighth day of treatment, we left our little patient, informing the mother that death would probably end the child's sufferings before morning. It was with much sorrow and regret that we gave this unfavorable prognosis. The parents were our intimate friends, and the patient was an only child. To please a friend of the parents, we had been asked to consult with a physician of limited study, and still more limited experience, and who, previously, in his intercourse with us, had so shamefully disregarded all principles of professional honor, that we were compelled, on this occasion, to decline the solicited consultation. Death, under such circumstances, would give unfriendly influence an opportunity to incite complainings and regrets. If other influences were wanting to nerve us to the fullest extent of our energies, it might be found in the fact that, though in quite active business, for more than two years, we had not lost a patient under sixty-five years of age, and we were desirous of protracting that interval to the utmost.

On our way home, we mentally reviewed the symptoms and the treatment from the beginning. That the pneumonia was gradually subsiding there could be no doubt. It was quite probable that there was no inflammation about the cerebral meninges, and that there was no effusion upon, or within the brain. It was probable that the symptoms arose from *anæmia*, and that death was about to take place because the nerve centres did not receive the requisite stimulus. Yet what treatment better than that in use could be brought in requisition, unless we practiced transfusion? This last we had never practiced, and were unwilling to commence in so young a patient. A more decided nerve stimulant and tonic was wanted. Was it to be found in our list of remedies? Strychnia was thought of; but could so powerful a remedy be safely administered, in a child so young, with hopes of beneficial results sufficiently speedy for our purpose? Reflecting thus, a conviction came over us, with the assurance almost of prescience, that the syrup of the hypophosphites of lime and soda was the best remedy in the *Materia Medica*, to meet the indication presented in this case under consideration. The brain and spinal marrow contains phosphorus largely, and it is quite probable that a remedy that will supply it in an immediately available form, will supply the stimulus desired. So plausible was this reasoning to our mind, at the time, that we returned immediately back, and in the darkness of a stormy night sought our little patient again. In addition to the treatment formerly advised, we ordered five drops of the syrup of the hypophosphites of lime and soda, to be repeated every two hours. We urged a persevering use of remedies, however discouraging the circumstances, until death or improvement should take place.

On the following morning we found our patient apparently somewhat improved. The moaning was less, the strabismus and spasmodic drawing of the eyes to one side had passed away, and the sawing of the air with the hands was much diminished. Though the prostration was great, and the symptoms still very alarming, yet the general expression was one that gave us reason to hope still for a favorable issue.

The treatment was continued, and the patient made a rather slow but perfect recovery.

We are aware that any conclusions drawn from one case would be as likely to be false as true, and our readers are left to draw their own conclusions from the case. The reasonableness of the treatment of hydrocephaloid disease, with the hypophosphites, connected with the prompt and satisfactory result in the above case, have induced us to report it. Subsequent experience only can determine the value of the remedy.

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## Influence of Sex on the Diseases of Children.

BY R. KUTTNER.

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THE materials for this essay are derived from the consideration of 10,000 cases of disease, which have been observed at the Children's Hospital at Dresden. The following are the conclusions Dr. Kuttner arrives at:—

1. Male infants are far more frequently, and especially during the first year, the subjects of disease of the digestive organs than female infants. It is a well-known fact that they are more difficult to bring up by hand, being much more liable to have the digestive apparatus disordered by defective or erroneous diet. In a relatively equal mortality of the two sexes, a much absolutely greater number of males die of this class of diseases. 2. So also

diseases of the nervous system, particularly brain affections, and especially within the five first years of life, are almost twice as frequent in boys as in girls. 3. Finally, boys are far more disposed to hernia (of 116 cases, 75 occurred in them) than girls, and that with regard to both umbilical and inguinal hernia. 4. On the other hand, girls suffer more than boys from affections of the respiratory organs, especially catarrhal affections; for while the former presented 1128 cases, the latter presented but 988. But the difference becomes especially obvious during the fifth year; as the difference, insignificant (873 girls to 843 boys) prior to that age, then mounted up to 255 as compared to 145. Of 498 cases of pertussis, 281 occurred in girls and 217 in boys. Of 17 cases of croup, 9 occurred in boys, and 8 in girls. 5. In organic disease of the heart, a preponderance of females existed, viz., 13 out of 19 cases. 6. In acute blood-diseases, as exanthematous and typhus fevers, sex seems to exert no influence; but such influence is remarkable in the chronic blood-diseases and dyscrasias, especially in anæmia, and scorbutus-like depravation of the blood. Of 144 cases of this class of disease, only 26 occurred in males, and 118 in females. The difference becomes more marked with the advance of life; for while under 7 years of age, 17 boys and 30 girls belonged to this group, between the years of 8 and 13, there were but 8 boys to 88 girls. Scrofula and tubercle exhibited themselves in the proportion of 305 in girls to 269 in boys. Until the course of the second year, there was a preponderance in the males (86 boys to 69 girls;) but after the fifth year there were, owing to the greater frequency of pulmonary phthisis among them, 121 girls to 72 boys. Rickets were observed in 577 boys and 610 girls, the disease being later developed and more enduring in girls than in boys. Congenital syphilis was observed in 36 boys and 49 girls. 7. Chronic diseases of the skin occurred in 903 of the 10,000 cases of disease; but no marked difference from sex was observed prior to the ninth year, after which period girls were found much oftener subject (88 to 31,) and especially to diseases of the scalp, than boys. 8. Enlarged thyroid gland was met with in 15 male and 35 female children—25 of the latter having passed the ninth year.—*Med. Times and Gaz.*, Dec., 24, from *Journal für Kinderk.*, Bd. xxxii.

**ANÆSTHETIC EFFECTS OF BISULPHIDE OF CARBON.**—"Dr. Wm. H. Uhler, of the Falls of Schuylkill, at a recent meeting of the Academy of Natural Sciences, mentioned that he had a short time before accidentally inhaled the vapor of the bisulphide of carbon, which had produced complete anæsthesia. He was removed from the laboratory by the workmen in a completely insensible condition. He revived in a short time suddenly and completely, and he did not subsequently experience any nausea or the least unpleasant symptoms. Whilst in a state of anæsthesia, his visions were of the most pleasant and agreeable character."—*Med. News*.

**OVARIOTOMY IN OHIO.**—Prof. J. W. Hamilton, in his report made to the Ohio Medical Society (*Ohio Med. and Surg. Journal*, Nov., 1859,) has collected an account of the operations for ovarian disease performed in Ohio.

He states that ovariectomy has been performed or attempted forty-two times, where the operator and patient belonged to Ohio; in eight cases by Ohio surgeons upon patients residing in other States, and one on a resident of Ohio by a surgeon of an adjoining State, making a total of fifty-one cases.

In thirteen cases extirpation was impracticable; in seven of these the attempt was evidently the cause of death.

In thirty-seven cases extirpation was accomplished; in sixteen of these death was evidently caused by the operation. In twenty cases recovery took place.

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## On the frequent Occurrence of Phosphate of Lime in the Crystalline Form in Human Urine.

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BY ARTHUR HILL HASSALL.

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IT IS commonly stated by writers on the chemistry and pathology of the urine, that phosphate of lime never occurs in the renal excretion in the crystalline form, but always presents itself as a granular amorphous deposit.

The author has shown in this communication that deposits of phosphate of lime, in well-marked and highly characteristic forms, are of frequent occurrence in human urine, very much more so indeed than the amorphous deposits of that salt, which are comparatively rare and exceptional.

It follows, therefore, that the statements hitherto advanced, of the absence of crystallized phosphate of lime from the urine of man, are erroneous.

From the frequency of their occurrence, it is singular that the true nature of these crystals should have been so long overlooked. This, the author considers, cannot have arisen from the crystals themselves, at least in some of their various modifications, not having been observed, but rather from their having been confounded with those of the phosphate of ammonia and magnesia, from which, however, they differ as much in form as in composition.

The author considers the occurrence of deposits of phosphate of lime to be of deeper pathological significance than those of phosphate of magnesia or phosphate of ammonia. While the greater part of the phosphoric acid of these latter phosphates and all their magnesia are derived from the ingesta, there is in the animal organism in the bones several pounds' weight of phosphate of lime, from which, in some cases and in certain maladies and conditions of the system, the deposits of that substance encountered in the urine are doubtless obtained.

The communication was illustrated by a series of drawings, exhibiting the several varieties in the form and grouping of these crystals observed by the author.— *Proceedings of Royal Society.*

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**SUNKEN NIPPLES.**—In the *Medical Press*, for December 3d, in a lecture upon the "Management of the Puerperal Woman and her Infant, during the Month," Professor Bedford has the following practical remarks: "It will sometimes happen that the nipple is quite sunken and flat, so much so that it will be impossible for the child to grasp it in its mouth. The consequence will be, that the mother is fretted and fatigued by the negative efforts of the infant; and this latter will be defrauded of what it has a birthright claim to—its natural nourishment. It is the easiest thing imaginable to remedy the difficulty. Take an ordinary pint bottle with a long neck, fill it with hot water, then pour out the water, and apply the mouth of the bottle immediately over the nipple; as the bottle cools a vacuum is formed, and thus a powerful but equable suction is produced, which results in elongating the nipple. The bottle is then removed, and the child applied."

From the New Orleans Medical News and Hospital Gazette.

### Medical School Statistics for 1859-60.

	Students.	Graduates.
Jefferson Medical College, - - - - -	630	170
University of Pennsylvania, - - - - -	515	173
University of New York, - - - - -	411	138
University of Nashville, - - - - -	401	...
University of Louisiana, - - - - -	401	113
*Medical College of South Carolina, - - - - -	248	...
New Orleans School of Medicine, - - - - -	216	63
College of Physicians and Surgeons, New York - - - - -	195	55
Massachusetts Medical College, - - - - -	196	...
Atlanta Medical College, - - - - -	166	50
University of Louisville, - - - - -	130	...
Ohio Medical College, - - - - -	123	...
New York Medical College, - - - - -	75	20
Buffalo Medical College, - - - - -	70	...
Oglethorpe Medical College, Savannah - - - - -	60	...
Medical Department of Yale College, - - - - -	..	13
Rush Medical College, Chicago - - - - -	100	36
Pennsylvania Medical College, Philadelphia - - - - -	..	37

\*This mark is to designate those Colleges to which the seceding students attached themselves; thus, of course, increasing the list of matriculates.

TREATMENT OF ASCARIDES.—By M. Hervieux.—M. Hervieux, after relating an interesting case in which the irritation produced by ascarides in an adult was long mistaken for severe rectitis, communicates the results of his experience in the treatment of this troublesome affection in children. In the first place, of all purgatives castor-oil is the best; and this statement is made after a full trial of salines, calomel, scammony, jalap, etc. The oil always gives rise to a greater or less evacuation of the worms, giving the patient a truce of some months. It is true that it is only a palliative. But where is an agent for a radical cure to be found? Mercurial ointment, passed in upon the finger, is of no durable efficacy; and the daily injection of cold water does not destroy the disease, but acts only as a palliative. Still, this last is the best means to adopt when castor-oil cannot be taken. Injections of olive oil, of sulphuret, of potassium, of lime-water, or of corrosive sublimate, which have been prescribed by practitioners in cases which have since come under M. Hervieux's notice, have never led to a definite cure. Time seems, indeed, to be the sole agent capable of completely destroying these helmintha; and M. Hervieux has met with numerous individuals who during childhood had suffered much from ascarides, and who, having reached the adult age, no longer gave any signs of them. In a few instances, however, the worms are still met with at an advanced period of life. The female worm is distinguished from the male, among other marks, by being nearly twice as long, and in the numerous cases in which he has searched for her, M. Hervieux has never yet been able to detect any females amid thousands of worms.—(*Bull. de Therap.*, t. lvi., and *Medical Times and Gazette*, February 11, 1860.)

From the New Orleans Medical and Surgical Journal

### Arctic Hygiene.

BY DR. HAYES.

[In the last number of the Proceedings of the Biological Department of the Academy of Natural Sciences of Philadelphia, Dr. Hayes made the following report, under the Head of Hygiene.]

DR. HAYES stated that during the late cruise of the *Advance* to the Arctic seas, his attention was directed to some facts in relation to the capabilities of men to resist low temperatures, which, at the friendly suggestion of Dr. Hammond, he had grouped together, and, with permission, would submit them to the department.

He thought that there was a great misapprehension existing in the popular mind upon the subject of Arctic life, it being generally thought that Arctic travelers were necessarily subjected to great hardships, in consequence of the lowness of the atmospheric temperatures. This he could but consider a great mistake. The animal economy everywhere adapts itself with greater or less facility to surrounding circumstances, and this power of adaptation is no where more strikingly exhibited than in the Arctic regions. The appetite and digestive powers are doubtless more intimately concerned than any other of the animal functions, and in the quantity and quality of the food consumed we are led to look for an explanation of the cause which enables the inhabitants of Polar countries so successfully to resist the cold.

The Esquimaux, with whom he had had communication in the far North, were found living mainly without fire. They have no wood, and no means of creating an artificial temperature, except with a small lamp, using blubber for fuel and moss for wick. The flame of this lamp gives very little heat, and is barely sufficient to melt from the snow the water which they require, and to light their huts during the dark period of the winter. During the coldest season they often live in snow-houses, the temperature of which ranges from zero to the freezing point, being kept thus elevated above the temperature outside, which ranges from 30 to 70 degrees, chiefly by the heat radiated from the persons of the occupants; yet, with this seemingly unendurable temperature, they appear to live in comfort. They do not hesitate to expose themselves to any degree of cold, when engaged in hunting, and often sleep upon the snow, with no other protection than a piece of bear skin, on which they lie. Nevertheless, these people are strong, robust, and healthy. Scurvy is unknown amongst them, and Dr. Hayes had never heard of, or seen, a case of tubercular disease.

Dr. Hayes thought that we must look for an explanation of this wonderful power of resistance to the character of their food. They subsist entirely upon an animal diet, the flesh mainly of the walrus, seal, narwhal, and bear; and the quantity which they consume seems really enormous. He had frequently seen an Esquimaux hunter, when preparing for a long chase, eat from six to twelve pounds, at least one-third of which was fat, and he would place the daily consumption of the men at from twelve to fifteen pounds. In this large consumption of animal food they find their shield against the cold, and he does not believe that they could live upon a vegetable diet under such exposure. The same laws govern the Esquimaux and the white men, and just in proportion as the crew of the *Advance* accustomed themselves to the diet of the natives, did they gain power to expose themselves with impunity to low temperatures. They found themselves continually craving animal

food, and especially fatty substances. The process of acclimation went on in proportion to their ability to eat and digest this kind of diet. During the early part of the cruise, they suffered much from temperatures, which, at a later period, produced no impression whatever upon them.

Dr. Hayes thought it was worthy of more than a mere passing remark, that scurvy and strumous diseases were unknown to the natives of the region, so far, at least, as his observations extended. In relation to the last, he would merely submit the fact; with regard to the former, he would say that wherever scurvy has occurred in the Arctic regions, it has been owing to accidental causes, which experience has taught us to remove or avoid. The long continued use of a salt meat diet had much to do with its development, and, as accessories, the cold, darkness, and excessive exertions. There is now, however, no necessity for the use of such a diet, and with abundant supplies of fish, animal food, and especially of fat, the last mentioned predisposing causes of disease ceased to have existence. Dr. Hayes thought that it was owing to their weakened condition, resulting from the use of salt food—of which they could eat only small quantities—allowing the cold and darkness to prey upon them, that an *epilepto-tetanoid* disease exhibited itself amongst the men of Dr. Kane's command, and affected similarly their dogs.

While fresh animal food is absolutely essential to the inhabitants of Arctic countries, Dr. Hayes considered alcohol in any shape not only useless but positively injurious; and in this opinion he was fully sustained by the experience of the enterprising and indefatigable traveler, Dr. Rae, whom we had recently the highly gratifying opportunity of welcoming to the Academy. On the other hand, tea and coffee are most useful; and he found himself at a loss to say which is best. The English and Russians prefer tea, while Dr. Kane's men took most kindly to tea in the evening when retiring, and coffee in the morning when preparing for a day's journey.

In relation to the animal diet used by the Esquimaux, Dr. Hayes observed that they eat it chiefly uncooked and frozen. This fact had been useful to him, and he would suggest it to his brethren of the profession as having, perhaps, some importance. He had frequently found that stomachs of scorbutic patients, which rejected cooked meats, would readily take raw meat in this state, or, as they expressed it, "cooked with frost." By this process the repulsiveness of the uncooked flesh is entirely destroyed.

Dr. Hayes said, in conclusion, that he submitted these facts to the department without comment, leaving for those better qualified to determine as to whether they threw any new light upon the highly interesting and important physiological question which they involve.

**PHOSPHORUS IN PARALYSIS OF THE MUSCLES OF THE EYE.**—By M. Tavignot. —M. Tavignot, in localized paralysis of the muscles of the eye, employs with success the following liniment: Walnut-oil, drms. xxv; naphtha, drms. xij; phosphorus, gr. iij. Frictions are performed in the evening by means of a piece of flannel; this remaining also fastened around the forehead all night.

M. Tavignot also administers the following emulsion internally: Oil of Almonds, drms. ijss; phosphorus, gr. iss; gum-syrup, drma. xxijss; powdered gum, drms. ss. To be well shaken when administered, the dose being at first one, and then two and three teaspoonful per diem.—*N. Y. Medical Press.*

## Notes on some Experiments on the Cervical part of the Sympathetic Nerve of a Beheaded Woman.

BY PROFESSOR RUDOLPH WAGNER.

THIS morning at half-past nine o'clock a woman twenty-eight years old was beheaded, at a short distance from our town, and I made some experiments upon her head, which confirm and complete a number of experiments of the same character made last summer, and referred to in the first series of my researches upon the functions of the brain. The principal object of these researches was to determine the function of the smooth muscular fibres recently discovered by Dr. Muller of Wurzburg.

After describing certain circumstances which interfered somewhat with the examination, Professor Wagner goes on to say:—

The decapitation took place at thirty-two minutes after nine o'clock, and eighteen minutes afterwards, namely, at fifty minutes after nine o'clock, the head was put upon the dissecting table. The head had been carried to the laboratory wrapped in a warm cloth.\* The knife had cut the sixth cervical vertebra, and the division of the two great sympathetic nerves had occurred about an inch and a quarter below the swelling of the superior cervical ganglion. The temperature of the interior of the buccal cavity was at 99 degrees 32 Fahr. The inferior portions of the neck were still warm. The palpebral opening was about five millimetres; the pupils were of middling size, (about five millimetres in diameter.) The axes of the eyes were horizontal and parallel to one another.

To produce the excitation I had prepared two electro-magnetic rotatory apparatuses, on account of the ease with which they can be carried and used. The sympathetic nerves when prepared were put in contact with the platinum needles of the reophore, in accordance with the rules of Dubois-Reymond.

The eyelids having been closed by gentle pressure, electrical stimulus was applied to the cervical portion of the right sympathetic. The eyelids opened slowly about three or four seconds after the apparatus was put in action. There was especially a marked lifting of the upper eyelid. The vertical diameter of the palpebral opening reached to about eight millimetres, but later decreased to six millimetres. Between the eyelids the lower half of the cornea was visible, behind which the pupils could be seen to dilate. When the electrical stimulus was very strong, the dilatation of the pupils became so great that the iris was hardly from one and a half to two millimetres in size.

The same experiment produced like results upon the other eye, and indeed the experiment was repeated six times upon one side until twenty-five minutes had elapsed since the beginning of the experiment, and consequently three-quarters of an hour after decapitation. It was even possible to attain to like success when the ends of the sympathetic, separated from the surrounding tissues, were almost cold. The eyelids then opened more slowly; about six seconds elapsed between the beginning of the action of the apparatus and the movement of the eyelids, which, in order to insure success, we were obliged to close entirely before attempting the experiment.

\*It is remarkable that the eminent physiologist, to whom we owe this labor, should still remain in ignorance of the law, that the lower the temperature of the nervous and muscular tissues, the longer they retain their vital properties. According to this law, Wagner could have done nothing more injurious than to prevent the cooling of the head upon which he was about to experiment.



After it became impossible to succeed any longer by applying the conductors near the cut end of the nerve, a small opening was obtained, after about thirty minutes, by applying the conductors to the ganglion itself, then exposed for the first time. The iris continued irritable some time longer. The dilators of the pupil were still irritable at the seventh experiment on the same side and obeyed the stimulus of the great sympathetic at the thirtieth minute. They would have responded still later had not the head been taken away by Henle for the purpose of experiment.

No change in the curvature of the cornea was noticed, nor even any of that lifting of the ocular globe so plainly observable in experiments on animals, (See *Neurologische Untersuchungen*, p. 132.) In the dog I could estimate this rising up of the globe as equal to at least from two to four millimetres.

There remains no doubt that in these experiments the opening of the eyelids does not depend on the elevator of the superior eyelid as has been recently asserted, since the movement has really all the characters which belong to the action of smooth muscular fibres in accordance with the laws enunciated by Edmund Weber; thus a perceptible interval elapses between the beginning of the excitation and the contraction, its visible effect; and this contraction, moreover, persists, after this excitation has ceased. When the extremities of the reophores were carried deeply into the muscles of the neck, and excited at one and the same time, branches of the hypo-glossal nerves, the facial and the fourth pair, there were produced tremulous movements in the muscles of the chin, the mouth, the nostrils, and of the jaws, as well as in the orbicularis muscle of the eyelids.

The well-known twitching of the muscles thus produced by galvanism differed totally from the slow movement of the eyelid caused through the agency of the great sympathetic.—(*Journal de Phys.* January, 1860; from *Zeitschrift für Rationelle Medizin*, dritte R., Band v, 1859.)

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ON THE EXISTENCE OF CERTAIN SMOOTH MUSCULAR FIBRES IN THE ORBIT OF MAN AND MAMMALS.—By H. Muller.—1. The inferior orbital fissure in man contains a mass of reddish-gray color, composed of hundreds of smooth muscular fibres, the most of which are provided with elastic tendons.

2. In mammals a more strongly developed muscle is found; as the analogue which we have just described, it forms a skin muscle—the orbital muscle of some writers, and is equally composed of smooth muscular fibres.

3. The nictitating muscle is partly composed of smooth muscle and partly of tractile fibres transversely striated, acting from in front backward.

4. The orbital muscle is provided with bundles of nerves which contain scarcely any fine fibres, such as characterize the sympathetic system. These nerves are partly derived from the sphenopalatine ganglion.

5. The orbital muscle is the agent in producing that forward movement of the ball of the eye, observed in animals during excitation of the cervical sympathetic; it serves to antagonize those muscles which draw or push the eye toward the bottom of the orbit.—(*Journal de la Physiologie*, January, 1860; *Trad. de Zeitschrift für Wissenschaftliche Zoologie*, Band x., Haft 4, 1858.)

## Communications.

### Compound Dislocation and Fracture of the Astragalus. Exsection of the Astragalus. Recovery without Deformity.

BY DAVID WOOSTER, M. D.

FROM the anatomical relations of the astragalus, its dislocation must be very rare, and its fracture still more infrequent. Observation proves the accuracy of the primary deduction. It is especially difficult to understand how a force can be so applied to the astragalus as to fracture it to comminution, and dislocate it *through* the teguments, without at the same time breaking one or both of the leg bones or their malleolar extremities: and it is still more surprising how the restorative power of the human economy will triumph over such material lesions, and leave the victim not only in health, but without deformity, and with the functions of the part thus seriously injured, but slightly impaired.

I will barely remind my complacent readers of the anatomical position of this bone. It may be considered the axis of the ankle joint. On its upper surface rests the whole body, terminating with the lower end of the tibia. It is held firmly to the os calcis by the large interosseous ligament, passing between its inferior facets. This ligament from its size, great strength from the vertical and oblique disposition of its fibres, and the very slight motion it permits between the os calcis and the os tali, would seem of itself to be sufficient to prevent dislocation of the latter without fracture. Then we have the deltoid ligament uniting the internal malleolus to the astragalus, calcaneus, and scaphoid; and as if nature had thought again after this apparently ample security, there is an additional still stronger fasciculus beneath this, employed solely in attaching the internal malleolus to the astragalus. The guards on the outer side of the ankle, where dislocations of the astragalus would seem to be more liable, though apparently ample are not quite so secure. A strong fasciculus passes from the inner side of the external malleolus forwards, and is inserted into the astragalus, another of equal strength goes backwards from the same point and attaches to this latter bone. Another ligament goes from the same point of the malleolus externus downwards and backwards, and fastens permanently to the outside of the os calcis. There being no other portion of this articulation that would seem to require additional security, none is supplied except the thin membranous ligament extending from the margin of the lower end of the tibia to the astragalus in front of its tibial articulating

surface: this ligament is a mere investment of the synovial capsule, and adds very little to the strength of the articulation. The attachment of the astragalus to the scaphoid is not remarkably firm, being covered superiorly by a thin ligament only, and somewhat strengthened perhaps by the tendons of the extensors of the toes, and of the tibialis anticus which pass over this articulation. This bone is nearly one inch in thickness, vertically measured through the centre on its fibular side, but not so thick by one-fourth through its inner side, while its extreme posterior portion, just where it projects from between the tibia and os calcis, is not more than one-fourth of an inch in thickness. Thus ignoring the head of the astragalus, (which of itself is easily dislocated,) there remains a composite inclined plane whose true head is in a line dropped vertically from the anterior external angle of the quadrilateral superior or tibial articulating surface, and whose limit of inclination is the interio-posterior aspect of the bone. Now, from this double wedge-shaped form of the bone, and its ligamentous guards, we should infer that an inward or backward dislocation of the astragalus, would be next to impossible, and the fact agrees with the deduction. Mr. Erichsen says, (*Science and Art of Surgery* p. 270,) "The dislocation *backwards* into the hollow, under the tendo-achillis is of rare occurrence, there being but seven recorded instances of this accident; in the majority of these there was displacement of the bone *inwards* as well as backwards." From a moment's contemplation of the double wedge-shaped figure of the astragalus, the inclination being inwards and backwards, it is apparent how from the known laws of composite-forces, it would be inconceivable that this bone could be dislocated, either directly backwards, or directly inwards, or directly outwards. Strictly *lateral* displacements of this bone, it seems to me, are absolutely impossible. There are no well authenticated *lateral* displacements recorded, to my knowledge.

I cannot help here alluding to the kindness and good sense of nature, in placing the head of this great foundation-wedge outwards and forwards: were it inwards and backwards, there would not be the least stability in progression, and the ankle would dislocate at every step.

From the above it will be apparent that a vast majority of the dislocations of the astragalus must be forward and outward, for force being applied upon the sides of a wedge, it moves in the direction of the head, if it moves at all. The head of this bone being disarticulated from the scaphoid, and sufficient force consecutively applied to its sides, disarticulation outwards and forwards from between the tibia, and calcaneus *necessarily* follows, either with or without fracture of the astragalus, or with integrity of the astragalus, and fracture of one or both bones of the leg in consequence of firm attachments of the ligaments of this bone to the malleoli. No muscles are attached to the astragalus, consequently no new insertions must take place after its excision.

The case which has suggested these remarks is one of extreme infrequency, as every surgeon or physician will confess upon interrogating his experience for a single moment. For this reason I report it, and undoubtedly I do so with the more willingness, because of its very fortunate result.

July 29th, 1859, I was called to cross the bay to the village of San Antonio, to see a man who had been injured by falling from a horse. I arrived at 6 1-2 P. M., five hours after the injury.

*General Description.*—The patient, Samuel C. Switzer, is about 27 years old, five feet eight, sanguine temperament, firmly built and well proportioned. His habits are temperate; he is not accustomed to labor; his general health is good. For the last few months he has been taking specific medicines, IK, and HgI, etc., perhaps, without much, if any reason for so doing. At the moment of seeing him, he is in a state of great suffering, and talks somewhat incoherently. His pulse is 105 and pretty full. His suffering is in great part occasioned by the violent means which have already been employed for the reduction of the ankle, which is said to be "out of joint." A pulley and windlass apparatus was used soon after the injury, the attendants say, for about two hours, "to stretch the sinews so as to let the ankle back." All this was done without chloroform or ether, under the direction of the two or three physicians who were first called; but failing, they retired from the case temporarily, purposing to amputate the leg the next morning.

*Appearance of the Injured Extremity.*—On removing the temporary dressings left by "my predecessors," the left foot was twisted inwards: there was a laceration extending from the border of the tendon of the extensor longus digitorum, obliquely downwards to the distance of half an inch behind and below the external malleolus, leaving the latter entirely exposed, and also, the anterior margin of the lower end of the tibia. Through this great rent protruded a portion of the astragalus: at least one-fourth of its scaphoid articulation, and half of the concave triangular facet with which it articulates with the fibula, and a small portion of its tibial surface were nude. By this time the patient was completely under influence of chloroform. I now moved the extremity and felt extensive crepitation in the ankle joint: examined the leg bones and found them apparently uninjured. By the finger inserted into the rent beneath the end of the tibia, the astragalus was found to be broken across its tibial surface, and its posterior portion permanently wedged between the calcaneus and tibia, the fractured portions of the astragalus being so widely separated that the index finger moved freely between its two fragments; some minute fragments of bone were also felt in the bed of the astragalus. This was a case in which the diagnosis might be considered inevitable. Outward and forward compound dislocation and comminuted fracture of the bone.

The indication was a necessary sequence. Complete the removal of the astragalus as far as possible, without farther violence to the tarsal articulations, and trust nature for an imitative joint. The rent was enlarged with the bistoury, the remaining attachments of the dislocated portion of the astragalus were dissected off and the bone removed, when the foot immediately came into position. The scaphoid concavity felt to the touch uninjured, also, the articulating surfaces of the tibia and fibula: a few fragments of bone were removed from the remaining portion of the astragalus by the finger nail. The anterior fasciculus of the external lateral ligament hung like a ribbon

to the external malleolus; seeing no farther use for it I snipped it off close to its origin. The skin about the foot was quite livid from pressure of the reducing apparatus above spoken of. A tent in the cavity of the joint, three stitches in the upper portion of the tegumentary rent and incision, fenestral compresses, a dry roller, and over all dextrine bandage of several thicknesses, completed the dressing. The whole was now immovable, and on recovering from the anæsthesia, the patient suffered but slight pain.

The exsected portion of the astragalus weighs one ounce and three quarters. The principle fracture as might be expected, is not transverse but oblique; extending from the posterior angle of the fibular articular facet, across the posterior third of the tibial surface to the posterior portion of its internal malleolar facet, quite through the thickness of the bone. A double wedge of the kind of the astragalus cannot be broken transversely except by precontrived mechanical force. There is also a fracture of the outer edge of the inferior anterior facet, caused no doubt by the tearing out of the interosseous ligament from the sulcus tali. An elliptical segment of bone, the size of the thumb nail, had been wrenched from the inner side of the exsected bone, in front and a little below the inner malleolar facet; this detached portion remained in the ankle firmly adherent to the deltoid ligament, and came away by suppuration, at a subsequent period. These were all the injuries the bone suffered. The injury occurred thus: a horse on which Mr. S. was riding attempted to run away, on an almost rocky-hard road, near San Antonio. To prevent being crushed by the fences on either side of the road, Mr. S. placed both hands on the horn of the saddle and sprang off backwards over the crupper, the horse kicking up at the same time. He must have fallen a distance of about eight feet. He has no recollection of the manner in which he struck the ground.

July 30th, patient rather restless during the night, from cramps, and a constant sensation as of the foot stretched with the pulleys so long and vigorously tried the afternoon before. He had a grain of morphia at 8 last evening, and a dose of sulphate of magnesia at midnight. At 11 1-2 A. M., to-day, he arrives at his rooms in this city—having been brought across the bay. He still complains of the traction sensation, and the pulleys are fresh in his mind. There is scarcely any swelling of the extremity injured, pulse 88, bowels open. At 3 P. M., has a grain of morphia which quiets all uneasiness, and he goes to sleep.

At 9 P. M., pulse 130; mental faculties disturbed, foot so swollen that the bandages are quite tight, but not so as to impede the circulation in the ends of the toes. Cut away a disk of bandage over wound and find it looking well. Order two minims of extract veratrum viride every hour till vomiting occurs.

July 31st, 9 A. M., pulse 60. Swelling of foot much subsided; has vomited freely, and is now in profuse perspiration; says he has had no pain since 11 last evening. Took only four potions (8 minims) of veratrum. Perceive pus in orifice of wound. 9 P. M., pulse 100; foot swelling and hot. Veratrum one minim every two hours.

Aug. 1st, 12 M., cut away primary dressing, not because it has become too tight from tumefaction of the limb, but because never having known immoveable dressing applied to just such an injury, I am anxious to see the condition of the ankle and foot after nearly three days (and those the first three) of imprisonment in this solid dressing, which some surgeons whose opinions merit great deference, think very dangerous. Find all looking well, except that the teguments of the inner malleolus are swollen, red and painful; and this is the very point from which pressure had been partially removed by cutting out the disk of bandage from the opposite side on the second morning. On withdrawing lint from wound, a small quantity of synovia and pus follow. Apply three leeches to inner malleolus, by which pain and redness are removed.

At 4 P. M., pain and redness of malleolus returned: foot and ankle more swollen than ever, though constantly moistened with wet compresses. Patient complains of a feeling of want of support to the limb which annoys him exceedingly, and asks to have the bandage reapplied. Apply evaporating lotion for the present.

At 9 P. M., uneasiness and swelling still continuing, reapply four thickness of roller steeped in dextrine and camphor, and order it to be kept moist with evaporating lotion. Give one grain of muriate of morphia; pulse 110.

Aug. 2nd, 9 A. M., rested well during the night; pulse 84. Order a small purgative dose of black draught. 3 P. M., has been purged freely. Lotion continued; pulse 76, skin moist. 9 P. M., one grain of morphia: 20 drops of elixir of opium at 3 in the morning, if needed.

Aug. 3d, 8 A. M., has been comfortable most of the night. Pulse 80, no pain. 12 M., remove dextrine bandage and apply poultice, to favor suppuration. This was premature. At 3 P. M., am called in haste: pain and swelling much increased: pulse 120, find the foot œdematous. Apply two turns of roller from toes to knee, and order it kept moist with cold water. This affords immediate relief, notwithstanding the increased tightness of the bandage occasioned by its being moistened after application. At 9 P. M., pulse 82, no pain, tongue moist and coated yellowish white over whole surface. Order 30 drops elixir opium for the night.

Aug. 4th, 9 A. M., bandage loose by subsidence of tumefaction. No pain: pulse 95: seidlitz powders every six hours till bowels move. 9 P. M., bowels open, pulse 82. Complains of restlessness, because the foot is not supported by the now quite loose bandage: remove latter, and lay the leg and foot in a gutter prepared in a straw pillow. Suppuration free. Œdema as high as the tubercle of the tibia. No pain except on the heel from uniform position. Exceedingly nervous and restless. Ex. valerian and elix. op. alternated.

Aug. 5th, 8 A. M., comfortable: has slept well; pulse 80. Skin has been icteric for four or five days. No pain. 6th and 7th, nothing worthy of note. 8th, opened a small abscess over inner malleolus, and felt moveable fragments of bone after pus had escaped. 9th, some twitching of extremity, which caused pain by displacing the ankle from its bed.

Aug. 20th. Nothing of note has occurred till to-day, except that about three days since I removed with pocket-case forceps, the remainder of the tibial articular face of the astragalus, from the opening over the inner malleolus. It was about an inch long, and from one to four lines thick, and much eroded by the suppurative process going on. A considerable fragment of the astragalus must still remain, as this piece was not the fifth part of what must have been left at the operation, locked between the tibia and calcaneus.

To-day at 9 A. M., there is manifest erysipelas of the foot and leg, with delirium; pulse small and 110. Has ate too much. The red blush extends along the veins of the thigh, which is tender to the touch. Apply Velpeau's solution of sulphate of iron over whole limb; order an emetic, to be followed by a saline aperient. Erysipelatous swelling breaks over the phalanges of the foot, and there is slight sloughing. In a few days all symptoms of phlebitis and erysipelas have disappeared, and the case progresses favorably, without another untoward circumstance: a minute fragment of bone is removed from time to time with the forceps.

Oct. 11th, 76 days after the injury. The leg being bandaged, patient leaves the house on crutches. Three months later he laid aside his crutches and walked with a single cane. Now, May 19th, he walks with, or without a cane, and tells me he has been able to do so for a long time. He can stand without pain on the left foot alone; foot in the normal position, and the new joint moves quite freely in all directions, though not quite to the same extent as before the injury. The left limb is perhaps half an inch shorter than the right. Mr. Switzer walks with only a slight limp, which may eventually nearly disappear.

*Remarks.*—Numerous cases of fracture and dislocation of the astragalus have occurred and been recorded within the last century, and many of them have recovered with useful joints. But still these accidents are very infrequent. The following from the London *Lancet* bears the most marked resemblance to the one just reported of any I have seen recorded:

"A most unusual and singular form of injury to the foot is to be seen at Guy's Hospital, under Mr. Bryant's care. It occurred in a man fifty years of age, who has the look of a person of sixty. In getting off an omnibus, he fell, and so injured his foot that the astragalus was dislocated and forced through the skin forwards and outwards, and hung by a piece of membrane to which it was attached. On examination, this bone was discovered to be fractured, in addition to its displacement; it was therefore removed altogether. Both malleoli were intact. Although the man's general health was not favorable, he is doing well. Ice was assiduously applied after the injury, and opium given internally, and now the wound has all but healed by suppuration, and he may have a useful foot.

"In such injuries to the foot as the one referred to, it is usual to encounter fracture of the tibia or of one of the malleoli, according to the manner in which the foot has been twisted at the time of the accident."

There is another, reported in four lines in Mott's Velpeau, vol. 2nd, p. 762.

"*Excision of the Astragalus.*—M. Rognetta successfully extirpated the astragalus in a man, who, in the terrific accident on the Versailles railway

in May, 1842, had received a compound dislocation and fracture of this bone. What was remarkable, the limb, after recovery, retained its normal length. (Cormack, *Lond. & Ed. Month. Journ. of Med. Sc.*, Aug. 1843, p. 745.) T."

The efforts at reduction by powerful mechanical force, in Mr. Switzer's case, were almost inexcusably wrong, and being employed without anaesthesia, caused the patient a vast amount of excruciating agony, the vivid recollection of which disturbed his dreams and waking hours for a week after the accident, besides very much increasing the violence of the reaction. There was the less apology for the employment of this force, because from the large amount of the astragalus exposed, it was *impossible* for one acquainted with the elements of anatomy to mistake the nature of the injury, and consequently the treatment.

This is the tenth instance in which I have applied the dextrine bandage, impregnated with camphor, as insisted upon by Velpeau, (first systematized by M. Seutin, of Brussels hospital, (St. Jean,) under the name of the "removable-immovable bandage," hardened with starch instead of dextrine,) within a few hours of the occurrence of the injury; and I am convinced, that the sooner it is applied the better, and that it should not be *removed*, if avoidable, till after reaction has *subsided*, instead of not being *applied*, till after that time. It seems to me, in accordance with rational theory (and I am sure it agrees with carefully recorded observations,) that it should prevent swelling, diminish or prevent pain, by the firm and equable support it gives to the injured part and adjacent tissues, also, perhaps by the camphor it contains. I cannot imagine how M. Seutin or his followers can recommend, after fractures compound or simple, locomotion and the upright position, or in fact any position but that of the most complete repose possible, till the period of reaction has passed. This bandage has been most objected to in compound fractures or dislocations; the very cases in which it is most needed for the comfort of the patient. I have applied it immediately, that is, in the first hour, in two cases of compound fracture of the tibia, (one comminuted,) one of fracture and dislocation of the elbow joint, one of simple fracture of the fore-arm, two of simple dislocation of the elbow joint in boys under 12 years, one in dislocation of the ankle and simple fracture of the leg, and in all these cases it almost abolished pain, and prevented the excessive swelling with which such injuries are often attended. I always leave a long wire probe with the patient, or attendant, and tell him to pass it beneath the bandage and glide it along the skin from time to time, to ascertain if the bandage is too tight, or becoming so from tumefaction: this probe also affords the patient immense relief in scratching around the laceration of a compound fracture, which is often attended with an almost intolerable itching, when covered in with the dextrine bandage.

138 Pine Street, San Francisco, June 5th, 1860.



### Occlusion of Uterus, etc.

MR. EDITOR:—As you well know, the unfortunate condition of occlusion at all times commands the attention of the Physician. That the operation is one that cannot be lightly esteemed, the somewhat conflicting opinion as to the *modus operandi* proves. The condition attending my patient differed somewhat from those usually met with, as it will be seen that the occlusion was not prior but subsequent to impregnation. A few brief remarks may not therefore prove altogether uninteresting to your numerous readers.

To arrive at the exciting cause I will state that on the morning of Sept. 4th, 1857, I found Mrs. M— G—— had been in labor with first child some twenty-four hours. For some hours before seeing her, labor had mostly subsided. Presentation seventh of vertex, delivered with forceps a large but dead child. The inflammation induced by the severity of labor, the length of time the child remained in the passage, terminated as I shall report. One year since, or thereabout, I was consulted by the same patient, and soon found an occlusion of superior portion of vagina. With the ordinary surgery I succeeded in reaching the womb, finding this in the same condition as the vagina; no opening could be found, only as it was effected by the scalpel. On the use of tents, for a time I concluded my patient well. She at once conceived, and on the morning of 7th inst., my attention was called to her in labor, and soon found, as previously ascertained, without a break in the cervix, a slight dimple was all that indicated the os uteri. It was clear that conception had taken place, on the conclusion of the first operation: after this a firm cicatrix supervened. No time for consultation, with forcible and an advanced stage of labor threatening the alarming condition of a rupture of the uterus, and the escape of the child into the cavity of the abdomen. I at once resolved on an entrance by incision, which was readily accomplished by making two incisions through the parites at right angles, of something like an inch in length, and at the point indicated by the dimple. This was effected without my patient being sensible of additional pain. The head already occupied the lower strait, the presentation being the most favorable, first of the vertex, still nauseants previously used, together with ergot to arouse the already subsiding contraction, were in vain, when the forceps was applied barely in time to save a child of twelve pounds. After resuscitating the infant I was further perplexed on finding an adherent placenta, which required removal, by piece-meal, through an hour-glass contraction. Patient with but little fever, and without excessive lochia.\* Infant with a light doctors' mark; both at this date doing well.

S. P. TIBBITS.

Iowa Hill, July 13th, 1859.

## A Case of Acute Orchitis.

Treatment suggested by an extract from the "London Lancet." "Pacific Medical and Surgical Journal," (January 1860,) page 21.

**Case.**—Edward Smith, Company "F." 1st U. S. Dragoons, reported himself on March 26th last, as "ruptured." He had been kicked a few days before by a mule—the hoof covering right external abdominal ring—spermatic cord—and summit of right testicle. Scrotum well filled by effusion and sore to the touch. Pain from weight of testicle sickening. Pressure on testicle and cord produced excruciating pain. Site of external ring and scrotum sufficiently enlarged to warrant the patient's alarm and idea of rupture. Dragging pain along the course of the lumbo-inguinalis nerve. Movement in bed difficult and painful on account of distress in the loins. General condition sanguine and robust.

**Treatment.**—March 26th, hot water fomentations to scrotum and inguinal region, recumbent posture and light diet: the latter two means, observed strictly throughout treatment. 27th, mag. sulph. oz. i., tartar emetic gr. 1-4, ext. hyoscyami grs. iii., in pill, every four hours. 28th, continue pills and hot water fomentation. 29th, continue pills and hot water. 30th, continue pills and hot water. 31st, continue pills only. April 1st, scrotum more distended, and cord and testicle not less painful; pain in the loins and through the pelvis not lessened; continue pills; tinct. iodine to right side of scrotum and right inguinal region. 2d, 3d, and 4th, continue the same. 5th, pills only. 6th, pills and tinct. iodine. 7th, pills only. 8th, pills and tinct. iodine. 9th, pills only. 10th, pills and tinct. iodine. 11th, pills only. 12th, pills and tinct. iodine. 13th, pills only. 14th, 15th, 16th, 17th, and 18th, rest from treatment. 19th, duty. The disease yielded to nineteen days of medication, and five days of rest.

**Remarks:**—This was a case of genuine, so-called, *Hernia Humorolis*: the inflamed epididymis and testicle, the kernel of the disease, being quite beyond the reach of touch, without some pressure with fingers, on account of the great effusion into the tunica vaginalis. I designed treating this case throughout with tartar emetic, hyoscyamus, and hot water, but on the fifth day I stopped the hot water, because I thought it had had a fair trial of its efficacy, and on the 7th day, the effusion being on the increase, and the pain from distension being great, I felt compelled to discuss the fluid, which was effected steadily and rapidly by the application of the tinct. iodine, leaving the testicle itself, quite as much swollen, and as painful—though softer—as before the tunica vaginalis was emptied. In fact the tinct. iodine seemed to act chiefly on the absorbents of the tunica vaginalis, as I have noticed in other cases of acute orchitis: and all the benefit that resulted from the tinct. iodine, was obtained by the first four or five applications; its employment after that, seemed to do harm by keeping up irritation in the cuticle of the scrotum, for

as soon as it was freed from the iodine, the cure progressed rapidly. In *chronic* cases, I have found benefit from irritating the skin of the scrotum—even to blistering.

The relief in this case was the most rapid and complete of any of equal intensity, or I believe of any that have come under my notice or care, whether from gonorrhœa, metastasis, or injury. This patient, since his discharge from hospital, has been on the active duties of a mounted trooper, and on one occasion, rode on express eighty-two miles without a returning symptom. I am disposed to attribute his cure to the persistent use of tartar emetic in considerable doses, which had the effect of producing slight nausea at times after administration, a general sedation of the whole nervous and circulatory systems, and a consequent diminution of vital power, which latter was manifested by diminished temperature and paleness of the skin, compared with the normal condition; a tardy return of the capillary circulation after pressure with the tips of the fingers on the integuments, and loss of appetite.\*

The antiphlogistic plan of treatment is the one of course that is generally inculcated, and in my previous experience with *acute* orchitis, I have employed general bleeding, mercurials, opiates, saline purgatives, with other antiphlogistics variously combined, conjoined with tinct. iodine locally, recumbent posture, suspensory bandage, &c., but I have felt much perplexed by the usual slowness of the cure, especially as I made attacks upon the disease with these agents according to the plans laid down, and modified them from gentle to heroic; oftener the latter. Now, I believe, if my treatment in previous cases had been more with a view to a *sustained* antiphlogistic effect, such as can be obtained by tartar emetic, instead of *shocks*, by bleeding, mercurials, purges, &c., my success would have been somewhat equal to the case of Smith.

This brings me to what seems to be the main obstacle to treatment, and the chief cause of the obstinate capillary turgescence of the epididymis and testicle, which I believe all will admit to be difficult to remove in the majority of cases. This obstacle I conceive to be the *flow of blood* into the dilated vessels of the diseased parts, that attends upon venereal excitement, which often happens in these cases, and which doubtless is aroused in the genital apparatus considerably, by the heat of the inflamed parts, beside the ordinary causes of that condition, considering the flow and ebb of blood that takes place in the genital apparatus in the exercise of its specific functions. I would infer that the principle of treatment should be, to suspend for a time these functions in swelled testicles, and thus reduce the diseased parts to the condition of an inflammation, not subject to a disturbance of a *functional flow*. This principle appears manifestly in the management of enlarged prostate,

\*This way of determining the tone of the general system by the quick or slow return of color of the skin after pressure, announced by Dr. Gaston, "American Journal of Medical Sciences," (Oct. 1858.) I have found serviceable in examining recruits for the Army. It is corroborative of the indications of the pulse, whether for strength or weakness, and as a sign of those conditions, is not subject to fluctuation from embarrassment or fear, as is the heart.

cystitis, and gonorrhœa; also in the affections of the pelvic organs of the female, and I venture to mention it in connection with the treatment of orchitis, because I have not seen it suggested before. In tartar emetic, we have an agent all powerful to control the erotic erethism, and the attendant flow of blood into the congested or inflamed testicle, and to this property of the medicine, is doubtless due, in considerable measure, the success enjoyed by the author of the above extract from the *London Lancet*. In my case, Smith had no erections during treatment, and it is difficult to conceive how the system could sustain this clonic function, while the vital power was so reduced. This is but one case in my hands treated by the *continued* impression of tartar emetic, but it fully confirms the experience of the correspondent of the *Lancet*.

The necessity of keeping the genital organs at rest, and preventing the flow of blood into them that attends excitement, while undergoing treatment, was forcibly brought to my attention, by a case of enlargement of the prostate, which I will relate cursorily, by way of illustration and analogy. The patient, a middle aged man, had been given to venereal excess, and had had difficulty in passing his urine for two years before I saw him, during which time, he had been running the gauntlet among the charlatans; examination showed a lateral bend in the urethra at the site of the prostate. Finger in the rectum discovered the prostate a little larger than a walnut, and gristly to the touch. Pressure against the gland caused a desire to urinate, and a tingling feeling akin to the erotic sensation; even a gentle touch produced this sensation. It occurred to me from this, that the erethism of venery might arise considerably in this gland, and since he was annoyed by frequent emissions, the irritable condition of the prostate might be the immediate cause of them. I took my cue of treatment from this reflection, and expected that both conditions would subside by whatever reduced either. He, moreover, had a very irritable bladder, which tolerated but little urine, and pain on pressure; the urine fell perpendicularly, and he had some hæmorrhoids. All the pelvic organs were hyperæmic. The patient wanted to marry, and was greatly distressed, beside his other symptoms, by not being able to eject his semen, which flowed into the bladder, and dribbled away with the urine some hours after. The cause of this was plain: the enlarged prostate encroached upon the urethra, and narrowed that canal. Now, the one idea I would illustrate by this case in connection with the foregoing one, will be shown in the circumstance of the patient's relapse: after three months treatment, which I will not detail at this time, the prostate diminished sufficiently for number eight bougie to pass readily, by the patient's hand; the emissions ceased, though the tendency remained. He could wake in time to stop them by cold applications. Before the emissions were checked, every time they occurred all the symptoms would become aggravated, especially the narrowing of the urethra. He now began to think himself in a condition to meet his matrimonial engagement, but was anxious to experiment on his ability to eject *per cohabitatis*, before taking that step. I endeavored to dissuade him. He experimented. The next morning after, I was summoned hurriedly, and

found his bladder very irritable; the urine passed with pain, a few drops at a time, and the prostate sensitive and apparently as large, though not so hard as at first.

This sudden and great change for the worse of all of the symptoms, which had gradually improved up to this change, had struck me as wholly the result of the coitus, and illustrates strikingly the bad effects of a *functional flow* of blood into the genital organs when in a hyperæmic condition, and the necessity of staying the functions of these parts when suffering morbid congestion, and under treatment.

EDWARD P. VOLLUM, Ass't Serg't U. S. A.

Fort Crook, California, May 26th, 1860.

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### Remarks on the Mode of Administering Calomel.

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EDITOR PACIFIC MEDICAL AND SURGICAL JOURNAL :—

Although I have not practised medicine for the past nine years, yet I still feel an interest in the progress of medical discovery, and wish to communicate to your readers a fact which is not generally known, and I am not aware that it has heretofore been known at all.

It is in regard to a peculiar mode of administering calomel, and the results of which have been proved, both in my own person, and in its exhibition to many others.

When the full purgative effect is required, instead of giving from ten to twenty grains, I merely moisten the end of my finger, and take up from two to three grains. This I introduce into the mouth, at bedtime, and give directions to the patient to take no farther notice of it, but thereafter not to drink any liquid until morning. Immediately upon rising in the morning, I repeat with a smaller dose, say not over two grains.

This is the whole process, and in the course of the day, I have never known the patient to fail being freely purged, more so than fifteen grains will generally do, when given in syrup.

The discharges are of the same character as those produced by a large dose.

Being so rusty in my profession, I do not know that I have any right to do more than announce the fact; but I will also venture to give my theory of its action—which is this. That by applying the calomel in an unmixed dry powder to the mucous membrane of the mouth, it slowly diffuses itself over every part of the tongue, mouth, fauces, œsophagus, and lastly, the stomach, and a general mild action takes place over a much larger and more sensitive surface than when taken covered with syrup, or in form of a pill, as, when given in the latter modes, it acts almost exclusively upon the stomach, which

is used to the continued action of various stimulants, and the mucous membrane of which has probably become less sensitive than those other portions which ordinary stimulants momentarily affect in passing over them.

In other words, a larger surface is impressed, although in a milder manner, and the increased sympathetic influence or power exercised by this larger surface over the other portions of the mucous membrane of the intestinal canal, more than compensates for the difference in the dose.

Whether my explanation is correct or not, the facts are as stated, and I leave the matter with those who can use the knowledge to better purpose than I can.

EUGENE CROWELL.

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### On the Complications and Sequelæ of Scarlatina observed during the prevalence of the late Epidemic in San Francisco.

BY H. H. TOLAND, M. D.

FROM the time the United States Government obtained possession of California, until 1859, scarlatina did not prevail as an epidemic in San Francisco. Previous to that time cases occasionally occurred, and some of a violent character, but the disease was generally confined to the children of one family in a neighborhood, and occasionally to a single member, but from the period above specified, it spread rapidly until almost all the children in the city susceptible to the disease became affected.

In September, before the commencement of the rainy season, cases were numerous—many presented nothing unusual during their progress, although complications were not unfrequent, and the sequelæ were often serious and obstinate, if not unmanageable.

The most prominent complications observed and treated, were—1st. Congestion and irritation of the substance and membranes of the brain. 2d. Inflammation of the parts adjacent to the throat. 3d. Bronchitis, pneumonia, and congestion of the lungs. 4th. Pleuritis, accompanied with serous effusion into the cavity. 5th. Irritation and inflammation of the gastro-intestinal mucous membrane. 6th. Congestion and other derangements of the kidneys. 7th. Rheumatic inflammation of the synovial membranes with serous effusion into the joints. 8th. Inflammation of the sub cutaneous cellular tissue with effusion of serum. 9th. Epistaxis.

1st. In young children of nervous temperament convulsions frequently occur before the eruption makes its appearance, and result either from congestion of the brain produced by the increased arterial action that precedes its development, or from the gastro-intestinal irritation that exists, indicated

by the violent and obstinate vomiting and purging that supervenes in, a few hours after febrile symptoms become manifest; frequently these yield to the remedies usually prescribed in such cases, and the eruption appears; but occasionally the pulse becomes feeble and rapid, the extremities cold, followed by great prostration, convulsions, coma, and death, without any evidence of the existence of scarlatina, except that other members of the same family were similarly but less violently affected, and in whom the disease was subsequently fully developed.

Two cases of this character occurred in children under one year, both of which terminated fatally in less than forty-eight hours, whilst other children in the same houses suffered from the anginous variety and recovered. Delirium, tremors, convulsions and coma, usually appear after the occurrence of the eruption, and during the existence of high arterial excitement, or after it has suddenly disappeared in consequence of the influence exerted by the poison upon the nervous and vascular systems.

J. C——, a strong and healthy boy, aged four years, was attacked Nov. 1st, 1859, with the usual symptoms of scarlatina; the eruption appeared on the second day, accompanied with a hot and dry skin, and a full and frequent pulse, and notwithstanding cold applications were made to the head, and nitrate of pot., and tinct. aconite rad., combined with other diuretics, were administered about twelve o'clock on the fourth night, he was attacked with convulsions, which yielded to venesection, ol. Ricin followed by an enema, and ice to the head. He remained comatose for two days after the convulsions ceased; the mixture prescribed to control the excitement was continued during convalescence, which was tedious; the least irregularity of diet produced fever; he, nevertheless, escaped dropsy, which is a common sequelæ of this form of the disease.

A. W——, a child aged 2 years, healthy, but delicate, complained Nov. 6th, and on the next morning the eruption was abundant, accompanied with a full strong pulse and hot skin: he complained of difficulty of deglutition—his tonsils were ulcerated, and the lymphatic ganglions on both sides of the neck were considerably enlarged; muriatic acid, diluted with an equal quantity of water, was applied to the ulcers with a small brush, and the following mixture prescribed—pot. nitras, dr̄m. ss.; tinct. aconite rad., acid hydrocyanic aa. gtt. vi.; syr. scillæ, oz. ss.; syr. simplex oz. iss., m. sig. give one teaspoonful every two hours. In twelve hours the neck was so much swollen externally that both respiration and deglutition were difficult; two leeches were applied to each side, and after the bleeding was arrested, counter-irritants were continued as before. But little change was perceptible in his symptoms until the morning of the fourth day, when I found him delirious and almost pulseless, his skin cold and livid, and so restless that constant attention was necessary to keep him in bed.

Clothes wet with hot vinegar were applied to the anterior portion of the body, then covered with oiled silk, and retained by a bandage: ol. terebenth was substituted for the vinegar over the region of the kidneys, and his father

was directed to give him as much sherry wine properly diluted as he could be induced to take.

By 12 o'clock the excessive restlessness had subsided, his pulse was more full and strong, and the eruption had reappeared; for four days he remained in a comatose condition, and did not even recognize his mother. The febrifuge and diuretic mixture was administered every two hours, and California port-wine substituted for the sherry, which was preferred at first, in consequence of the excessive and sudden prostration that existed. This course was continued until he became conscious; then food was substituted for medicine, although wine was given regularly until he had entirely recovered.

Tremors, both of the muscles of the extremities, and of the anterior part of the neck, after the first three or four days, in violent cases, are very frequent, sometimes even in those that terminate favorably, and exceedingly distressing in consequence of the difficulty experienced in deglutition; this symptom was so common that it is unnecessary to specify cases, particularly as it is controlled by the treatment calculated to remove the other symptoms of the disease. It indicates a prostrated condition of the system, produced by the poisonous constituents of the urine retained in the blood, in consequence of the derangement of function resulting from the diseased condition of the organs inseparable from the existence of scarlatina, as will be more fully explained when that complication is considered.

In all the cases of cerebral disease observed during the prevalence of this epidemic, the pupils were rarely, if ever, dilated, and strabismus existed in one case only.

A child aged thirteen months, neglected when relief might have been afforded, presented all the symptoms of meningeal disease, with effusion, indicated by great restlessness, rolling of the head, and contraction of the flexor muscles of the thumbs, succeeded by convulsions and death. A fatal result should always be expected where such symptoms exist, no difference how they are produced.

2nd. In the anginous variety of scarlatina, inflammation frequently extends from the tonsils to the pharynx, larynx trachea, nares, and even to the ear through the eustachian tubes, within the first forty-eight hours, and some complications may appear at a much later period in milder forms of the disease. When laryngitis occurs during the first two or three days, it is the most fatal complication of this formidable malady; at a later period, however, it is much less dangerous. I have treated many cases successfully by administering from two to five grs. pot. carbonas every hour or two, according to the age of the child and the urgency of the symptoms, in combination with the remedies usually prescribed.

A female child, aged five years, after suffering for a day or two with the usual symptoms, was attacked Nov. 6th, with convulsions in consequence of the excessive arterial action that existed, increased by the presence of undigested food in the stomach; when relieved by a mild emetic, and cold applications to the head, the tonsils, and pharynx as far as it could be exposed were both



inflamed, and the former ulcerated. Diluted muriatic acid was applied as before directed, and a febrifuge and diuretic mixture prescribed. On the following morning the respiration was much more difficult than the day preceding, in consequence of the supervention of both laryngitis and tracheitis during the night, which produced asphyxia on the third day, by the occlusion of the larynx, resulting from the deposition of a cream colored lymph, that first appeared upon the tonsils and soft palate, and speedily extended into the larynx and trachea. This case resembled, in every respect, except the cutaneous affection, both in appearance and progress, an aggravated case of diphtheria. When the inflammation extends to the mucous membrane of the nares, a thin acrid and yellowish discharge sometimes escapes very freely, even where malignant symptoms do not exist, and is a source of great distress in consequence of the difficulty of respiration resulting from the contraction of the nasal cavities inseparable from the thickening of their investing membrane. Pharyngitis occurs more frequently, although it is much less fatal than laryngitis, in consequence of the facility afforded by its position for the direct application of remedies, also because the pharynx is a much less important organ. This difficulty should be treated by the same local and constitutional remedies previously recommended, in inflammation and ulceration of the tonsils, when dilute muriatic acid is applied every day or twice a day, from the time the affection of the throat becomes troublesome. I am convinced that inflammation is not so liable, to extend until all the surrounding parts become inflamed as was formerly observed, when other applications were employed.

Inflammation of the glands and cellular tissues of the neck is only a less serious complication than laryngitis; sometimes the parotid and submaxillary glands, as well as the lymphatic ganglions and cellular tissue of the neck becomes inflamed and greatly swollen; both sides of the neck are not only frequently affected, but occasionally the swelling extends below the superior extremity of the sternum. In such cases the tonsils are generally ulcerated, and they contaminate the surrounding parts. If the symptoms of general prostration are absent, leeches have generally been applied to the neck, and as much blood abstracted as was thought advisable: after considering that when under the influence of the poison generated during the progress of malignant scarlatina, the system does not sustain with impunity the loss of as much blood as might be safely abstracted under ordinary circumstances.

R. G—, a boy aged two years, was attacked Oct. 15th, and on the 16th the eruption appeared. Although his tonsils were ulcerated, and he had a violent fever; nothing unusual occurred until the fourth day, when his neck swelled so rapidly and extensively, that in a few hours, both respiration and deglutition were performed with difficulty; two leeches were applied on each side of the neck, and allowed to bleed freely; counter-irritants were then prescribed, and a teaspoonful of the following mixture given every two hours. R. ext. verat. viride, tinct. aconite rad., acid hydrocyanic aa, gtt. viii.; pot. nit. *dr. ss.*; syr. scillæ, *oz. ss.*; syr. simplex, *oz. iss.*; mix, and continued until the kidneys were acting freely, and the general excitement controlled, when as much California port wine, properly diluted, was administered as was

considered necessary to fulfill the indication : by these means, suffocation was prevented, and the child's strength sustained until suppuration occurred on one side. The opening made with the lancet to allow the purulent secretion to escape, enlarged until an extensive ulcer existed, which did not heal before the general health was entirely restored.

In such cases an extensive experience has convinced me that emetics and drastic purgatives should not be administered, and that after the application of leeches, if they be at all admissible diuretics, stimulants and acids, with verat, viride and aconite, are the remedies upon which we should rely, and that acids are not the least important of those enumerated. The blood, in consequence of the functional derangement of the kidneys, soon becomes contaminated, and diuretics, acids and stimulants, not only counteract that influence and control the disease, but also secure a more rapid convalescence than when treated by quinine and chalybeates in large doses, combined with food of the most nutritious character.

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## Editor's Table.

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*THE Gazetta Medica de Lisboa* will accept our thanks for eleven numbers per last mail. We cannot understand why it comes in famine or feast style, but it is most welcome in any shape. The profession in Portugal is a highly educated body of gentlemen, and its contributions to medical science, are marked by learning, research, and close thinking, both inductive and deductive. It is worth the physician's while to learn the Portuguese idiom, merely for the sake of reading the medical journals in that tongue. It can be acquired in *two weeks* by the Latin scholar, without very hard study, sufficiently, for the ready understanding of the written language. Letor Castroverde says, the physician should be able to read Greek, Latin, French, German, and Italian and *Spanish* : but if one can read Spanish he can also read Portuguese. Castroverde were he now alive and in America, would find very few of his polyglot doctors. We say it with shame, but with the finger of Nathan pointed at the Medical Schools of the United States, that at every one of them *diplomas are granted to hundreds who have no rational understanding of any language, not even their mother-tongue.*

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**ERRATA IN LAST NUMBER.**—In the article entitled "Advantages of Quackery," second paragraph, fifth period, read "dimly" for "thinly."

On page 198, second article, end of second paragraph, read "language" for languages.

DR. TIBBITS' communication had been mislaid nearly a year, when it accidentally *transpired* a few days ago. Its age does not diminish the admiration with which we contemplate the case and its result.

Occlusion of vagina and womb, operation, impregnation, *subsequent* occlusion of os uteri bi-lateral operation [of Bedford,] delivery with forceps, adherent placenta, hour-glass contraction, placenta removed in fragments, child of twelve pounds. Mother and child and doctor all survived, and are still living. Dr. Tibbits is a gentleman of veracity.

HOW THEY CONSTRUE US.—The *Philadelphia Med. and Surg. Reporter* says "if the belligerent tone of the Medical Journals of California is any indication of the social state described, (by Dr. R. B. Corman,) the Profession, in that region, must indeed be in a depraved state." Our dear friend the *Reporter* is severe, to insinuate that we are belligerent in this "region." Why there have not been more than three or four physicians *killed* in open fight in California in the last six months. One is occasionally winged by a stray shot or thrust, and occasionally badly cut up, but seldom in a mortal manner. The *Reporter* should not estimate our fighting status and inclination by our words, for those who *talk* loudest *act* least. Don't be hard on us: we are a society, or rather an incorporate corporation of brothers. If in our fraternal assemblies an irate aspirant for fame compresses the larynx of a contemporary, and is in turn punctured under the mastoid process with a cultellus, it excites no lasting animosity, nor permanent divarication of the contending powers; but all soon subside again into the plain of harmonious sympathy. "Be kind to each other!" is our motto; and genuine kindness consists as much in setting a brother right by force, or persuasion, as in bisecting a half eagle for his benefit in extremity, or in showing him the way to the wine when he can no longer follow the *feeble* beckonings of a depraved instinct.

WE have received the following card:—

"THE MEDICAL USES OF ELECTRICITY IN THE TREATMENT OF NERVOUS AFFECTIONS.—A new and important medical work, now in press, and will be issued in the course of a few days, by Messrs. TICKNOR & FIELDS. This will be a thoroughly systematic work of 700 pages, and finely illustrated with nearly 100 cuts, showing not only the best "*Methods*" for the therapeutical employment of Electricity in the various nervous diseases, but also *showing the anatomy of the parts* (nerve-trunks and muscle-fibres) liable to be involved; moreover presenting a concise view and means of diagnosis of the great variety of nervous affections met with in every-day practice. This work is from the pen of ALFRED C. GARRATT, M.D. of Boston, who of late years, it is well known, has made this difficult department of medicine his *specialty*. It is addressed to medical students, and is dedicated to Dr. JOHN HOMANS, President of the Massachusetts Medical Society. It is intended for the professional eye. There is no similar work in the English language."

The work mentioned has not come to hand, and, of course, we are entirely ignorant of its merits. We understand by a private note from the author, dated May 19th, that this work was to be issued the middle of June, inst.

**ANTIPHLOGISTICS DOUBTFUL.**—The late Dr. R. B. Todd, in his lectures on "Certain Acute Diseases," (see page 237 *N. Y. Medical Press*), says

"There will be found in the following pages evidence enough to show that the ordinary so-called antiphlogistic treatment is unnecessary (to say the least) for the cure of acute internal inflammations; and that the supposed necessity for such treatment rested upon an untenable hypothesis respecting the nature of inflammation and of fevers, and cannot be regarded as a legitimate induction from accurately observed clinical facts.

"The conclusions, which the clinical observations detailed in the lectures tend more or less to establish, may be summed up in the following propositions:—

"1. That the notion so long prevalent in the schools, that acute disease can be prevented or cured by means which depress and reduce vital and nervous power, is altogether fallacious.

"2. That acute disease is not curable by the direct influence of any form of drug or any known remedial agent, excepting when it is capable of acting as an antidote, or of neutralizing a poison, on the presence of which in the system the disease may depend (*materie morbi*.)

"3. That the disease is cured by natural processes, to promote which, in their full vigor, vital power must be upheld. Remedies, whether in the shape of drugs, which exercise a special physiological influence on the system, or in whatever form, are useful only so far as they may excite, assist, or promote these natural curative processes

"4. That it should be the aim of the physician (after he has sedulously studied the clinical history of disease, and made himself master of its diagnosis,) to inquire minutely into the intimate nature of these curative processes—their physiology, so to speak; to discover the best means of assisting them, to search for antidotes to morbid poisons, and to ascertain the best and most convenient methods of upholding vital power."

"The much vaunted powers of mercury as a remedy, not only to promote the resolution of acute inflammation, but also to cause the absorption of its product, lymph, rests first upon a false analogy; and, secondly, upon imperfect knowledge of clinical history."

**DENTAL ANOMALIES AND THEIR INFLUENCE UPON THE PRODUCTION OF DISEASES OF THE MAXILLARY BONES.** By Am. Forget, M.D., C.L.D., etc. Memoir crowned by the Academy of Sciences, at its Meeting of the 14th March, 1859. Paris: Victor Masson. Translated from the French. Jones & White: Philadelphia, 1860.

THIS is an elegant monograph of about sixty pages, illustrated with six morbid anatomical plates of great precision and excellence, both in fidelity and finish. The essay itself is closely and logically written, and in that culminating style in which, if a good essay be written, it leaves in the mind of the reader the idea of a useful and manageable addition to his knowledge. M. Forget well merited the Prize of the Academy, and the gratitude of the profession throughout the world.

**MALPRACTICE AND MEDICAL EVIDENCE.**—A Medico-Legal Treatise on Malpractice and Medical Evidence, comprising the Elements of Medical Jurisprudence, by John J. Elwell, M.D., Member of the Cleveland Bar, Ohio. THIS is as good as any of its predecessors in all respects, and in some, better. It contains six hundred pages. Among its contents are some new adjudicated cases. For sale by Bancroft & Co., corner of Merchant and Montgomery Sts., San Francisco.

APPLICATION OF CHEMISTRY TO ALIMENTATION.—Of fine flour and of bread made of it, considered politico-economically, and with reference to public health, by M. Mige-Mouries, (Academy of Sciences, Paris, 5th, March, 1860, *Gazette Hebdomadaire*.)

THE author enters into some details on the anatomical constitution of the grain of wheat; he particularly insists upon a membrane, the existence of which plays, in his opinion, the principle part in the phenomenon of alimentation, and which is entirely excluded from the fine flour of which white bread is made. "It can be proved," says he, "that it produces a diffusible [?] effect upon the encephalon, a peculiar *fraicheur* in the digestive tube, and a more abundant secretion of saliva, etc. Without it, flour kills the granivora, and with it the functions of the animal go on perfectly; indeed, the mamifera submitted to an exclusive regimen of bread, die within fifty days if the bread does not contain this membrane, but they live longer if it does contain it. In the face of these facts, it is impossible, in harmony with most physicians, not to attribute to ordinary white bread an injurious influence upon the general health. We should then let facts determine, and say in accordance with these facts, that ordinary white bread must be rejected, because, being difficult of assimilation, it produces long and irritating digestion; brown bread should be rejected, because one portion of its nutrient principles is decomposed, and normal, or good bread should be considered that which, without becoming brown, contains all the ingredients of the grain, both assimilable, and assimilating, that is, which aid assimilation, that is to say the whole grain minus eight one-hundredths of inert envelope." After condemning the usual processes of grinding grain M. Mouries describes his method in the following words: "For the new bread we employ seventy parts flour, eight parts of white shorts, five parts of brown shorts, and one part allowed for wastage, leaves sixteen for bran, or only the one-sixth part of the whole. The processes employed are of two kinds. In the community where prejudice requires a very white bread, the bran contained in the brown coarse meal, is separated with a moist sieve; in localities where the custom is less exacting, this bran is left, and there results a bread some what more yellow than the first, but of a more agreeable taste. This last bread, by its qualities, which ally it more nearly to the constitution of natural grain, will hereafter be adopted in towns, both for health and economy.

"Experiments made at the normal school, at the polytechnic school, and at the Saint Louis lyceum, are conclusive, and it is hoped that by perseverance brown bread will disappear, that the standard of public health will be elevated, and the cereal wealth of France be increased more than two hundred millions of francs *per annum*."

THE  
Pacific Medical and Surgical Journal.

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Selections.

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From the New Orleans Medical News and Hospital Gazette.

Lectures on Experimental Pathology and Operative  
Physiology :

Delivered at the COLLEGE OF FRANCE, during the Winter Session, 1859-60.

By M. CLAUDE BERNARD, Member of the French Institute; Professor of General  
Physiology at the Faculty of Sciences.

LECTURE VIII.—EXPERIMENTAL PATHOLOGY. ON DISEASES  
ARISING FROM THE VITIATED DEVELOPMENT OF CELLS

Summary : The Parallel between the Diseases of Man, and those of Animals continued—The External Manifestation of Vital Actions almost invariably due to Nervous Agency—Diseases in which the Nervous System does not appear to play a Part—The Powers of Development in some degree independent of Nervous Influence—Three Orders of Vital Phenomena within the Living Frame: First, Nervous, or Mechanical; Catalytic, or Chemical; Histological, or due to the Powers of Development—Evolution of the Living Being, in the first instance, Independent of the Nervous System—Origin of Cells: generally supposed to arise from a given starting point—Sometimes, however, of spontaneous growth—Powers of Development in the Adult Being—Their Intensity greater in the Lower Order of Living Beings—Morbid Manifestations of this peculiar Vital Force—Heteromorphous Tissue—Virchow's Researches on Cellular Pathology—Some Diseases the result of Imperfect Development; others of a positive deviation from the normal type—Modifications in Blastem, superinducing Cellular Disease—Local Affections not Real Disorders when viewed in a proper Light—Imperfect Nutrition, its immediate results—Absence of Glycogenous Matter in the Animal's Tissues—Consequences of a singular state of Things always ending in Death.

GENTLEMEN—We shall continue to-day the comparative study of the diseases which arise in man, and those which affect the lower animals; and in this lecture we shall bring to a close this important subject.

NO. XXXI.

The nervous system, as we have sufficiently proved, is the agent through which the vital powers almost invariably exert their influence; but the nerves themselves, in the manifestation of this activity, are inseparably connected with muscular tissue: motion is, in fact, the only symptom which reveals the presence of nervous power. We, therefore, invariably discover, in all the phenomena which belong to this class, three distinct stations—a centre from which the impulsion starts, nerves which transmit, and muscles which obey it.

Our last lecture was entirely devoted to the study of certain affections in which nervous influence does not appear to interfere—we allude to septic, virulent, and contagious diseases; but even in such cases, the nervous system almost inevitably plays a part in the production of the internal disorder, which results from the introduction of similar poisons into the economy. Let us adduce an instance of this. We shall select an example from the phenomena of embryology. The evolution of the ovum takes place according to well known rules, which have been established by direct observation; all its successive stages have been attentively watched in various animals, and it has been discovered that vessels and nerves which at the outset do not exist, make their first appearance at a given moment. Now, if certain poisons are introduced into the ovum during the first period of its development, the process of evolution is not interfered with, provided that heat, moisture, and the other external conditions, remain precisely the same as before. But, as soon as vessels and nerves have been formed, the ovum is immediately poisoned, and its vital activity at once extinguished. Here, then, we find certain phenomena connected with development, which appear in some measure to depend on nervous influence; but it must be acknowledged, that in the greater number of cases the reverse takes place, and that the powers which preside over the historical evolution of tissue are totally distinct from all other biological motors, and enjoy complete independence in their action. We are, therefore, compelled to admit the existence of three principal classes of phenomena within the living body, which, although closely connected through reciprocal influence, exist independently of each other.

Firstly—Nervous phenomena, embracing all the mechanical actions of life;

Secondly—Catalytical phenomena, embracing the various kinds of fermentation;

Thirdly—Histological phenomena, embracing the entire results of cellular evolution, or the process of development.

The two first classes of physiological agents, viewed in connection with the origin of disease, have been examined in our previous lectures; it now remains for us to investigate the latter—viz: the morbid phenomena superinduced by disordered powers of evolution.

It cannot be denied that during the first period of embryonic life, the development of tissue is in no way connected with nervous influence. The nerves have not yet been called into existence, and are only created at a later period, through the agency of that mysterious force which presides over the evolutions of the being so lately called into life. The vascular system being for similar motives, set aside, we discover, in the very first stage of existence, nothing but the primitive cell, and the medium in which it grows to maturity. But micrographists do not entirely agree in the view they adopt of the first step which commences that long series of successive evolutions, by which an entirely new living being is ultimately produced. That within an entirely amorphous medium, a living cell might spontaneously be produced, was the opinion of Schwann; but, in our own days, these views appear to have been completely laid aside; modern investigators are convinced that all living

organizations are invariably derived from one primitive cell, which, by its divisions, and subdivisions, gives birth to all the rest; now, this primordial element originates, of course, with the animal's parents.

We met, however, with cases in which it seems altogether impossible to deny that one or several primitive cells have been spontaneously generated within a medium which previously contained no vestige whatever of histological elements. The serum of blood, for instance, when introduced into a vessel hermetically closed, is found to contain, after a few days have elapsed, a large number of yeast-cells, which the grape-sugar dissolved in this liquid has probably produced; and yet, when carefully examined under the microscope, immediately after coagulation had taken place, it did not contain a single nucleus or cell. Similar results frequently occur for notice; and, in more cases than one, the mere process of subdivision and multiplication will not be found sufficient to account for cellular development.

In the adult the phenomena of evolution continue to exist, and although far less extensive than during foetal life, they are almost equal in importance. Thus, in certain animals, organs are found, which momentarily disappear, and are subsequently reproduced. Hunter observed that the sparrow's testicle, reduced during winter to the smallest possible bulk, promptly returns to its primitive size during the first days of spring. Mr. Stanlius has collected all the cases of similar reproduction which have been noticed in the animal series; thus in hibernating mammals, for instance, certain parts of the body are completely atrophied during winter, their functions being suspended for a time; some nervous ganglia are even found to disappear, more especially those connected with the genital organs; but as soon as the physiological activity of these parts is awakened, they are called a second time into being. Hunter also discovered that in the pigeon, a peculiar organ, no vestige of which exists in the animal's previous state, is produced during the latter part of incubation; the mucous membrane of the gizzard becomes tumefied, grows vascular, and secretes a new substance, which serves for the nourishment of the young birds when newly hatched. In the humane species (as in all mammals besides,) the rapid development of the mammary glands, towards the period of lactation, offers another instance bearing on the same point.

But must we consider these as the only phenomena of a similar nature which take place within the system? Do not mucous surfaces continually secrete new layers of epithelial cells? and is not the epidermis incessantly renewed on the surface of the skin? Here, then, we discover evident instances of histological development going on during all the stages of life. With respect to muscular tissue, its tendency to increase in bulk under the effects of constantly renewed exertion is perfectly known; but it has been hitherto admitted that the constituent fibres of a muscle may no doubt increase individually in size, but that their number invariably remains the same. A German micrographer, Mr. Budge, has lately endeavored to prove the contrary. A frog being reduced by abstinence to a state of emaciation, a small muscle is laid bare, and the number of its elementary fibres ascertained by direct investigation under the microscope. The animal being then properly fed, and gradually restored to a state of health, the same muscle is again examined; and, according to the ingenious observer, the number of its elementary fibres is found to have considerably increased, as well as their bulk.

Let us now consider the morbid manifestations of this power, which never suspends its action within the living body; we allude, of course, to those peculiar tissues which have been styled heteromorphous—an expression utterly condemned by German micrographers; for morbid tissue is generated within the economy in strict conformity with the laws that preside over foetal devel-



opment. But, as we have previously seen, both nervous influence, and catalytic agency, give rise to a variety of diseases when deviated from their proper course; thus, also, in certain given cases, the power of histological evolution may create positive disorder in the system. An immense and uninterrupted movement takes place within the organs of which the body is composed, for the purpose of supplying new tissues, in the place of those which are no longer fit to accomplish the functions devolving upon them; let this unceasing activity be diverted from its proper channel, and the production of tubercle, cancer, and all kinds of morbid deposits, will be the immediate consequence. We find here, as usual, an evident connection between the phenomena of health and disease, between physiological activity and pathological influence. The question which lies before us must evidently be viewed in this light; and such is the principal object of Virchow's labors on cellular pathology, the leading features of which it is our purpose to make known to you. But, before entering into the study of this particular point, a few general notions on the subject cannot safely be dispensed with.

Some diseases, in the first place, result from total absence or considerable deficiency of normal evolution on a given point. The mucous coat of the intestinal tube affords us a fine example of incessant development. New layers of epithelium are continually being secreted, to line its inner surface: but a living medium, or blastem, is necessary to their production; and whenever this blastem itself happens to be altered in its essential properties—a modification which always occurs in inflammation—the epithelium disappears, and is no longer regenerated. Cholera also exhibits another instance of this; for it has been indisputably proved that, in this disease, the vessels which ramify on the internal surface of the intestines are completely laid bare. In his admirable researches on the intestinal mucous membrane, Prof. Goodsir has established that, after each meal, when absorption has taken place, the epithelium which covers the villousities falls off, and is renewed during the interval which elapses before food is again introduced into the digestive apparatus—a remarkable instance of the rapidity with which the re-rodution of tissue frequently takes place. But when, through some pathological agency, epithelium is no longer secreted, what results from its absence? No obstacle is henceforth opposed to serous exudation from the vessels; no protecting surface resists the introduction of various poisons into the economy; and, lastly, no regulating power of absorption any longer exists. In this manner innumerable diseases may be traced back to the suspended activity of normal evolution as their primary cause. The chronic inflammation of the trachea and bronchial tubes likewise destroys the vibratile epithelium, the utility of which is too well known to be expatiated on.

But we meet, at the same time, with other diseases, which arise, not from interrupted, but from perverted evolution. You are, of course, well aware that cells which pursue a regular course in their development comprise three distinct elements—Firstly, an envelope, or cellular paries, the physical properties of which take a prominent share in its action; secondly, liquid contents, the importance of which is principally derived from their chemical composition: and, lastly, a nucleus, in which the powers of development appear to reside. As soon as a morbid state of nutrition supervenes, the contents of the cell are liable to alteration. Whether pigment, or fatty substances, or calcarous salts are therein deposited, morbid tissues are gradually formed, and disease is introduced into the system; and, even in similar cases, no pathological entity, no abstract principle of disease, is required to explain the fact. The deviation of physiological activity is its only cause. It is therefore evident that, in their successive phases of development, heteromorphous tissues entirely resemble the normal ones, and are subject to the same

**natural laws.** To Muller belongs the honor of having been the first to proclaim this great principle; and he may therefore be deservedly styled the creator of cellular pathology. He was the first to open that path in which Virchow now treads with so much success.

The intercellular tissue, or blastem, is the medium from which the cells derive the elements of their formation; it is, according to Virchow's picturesque expression, their territory. Now, there exist various conditions in which the blastem no longer contains the principles required for the normal development of cells; it is, for instance, indispensable that it should always contain glycose, albumen, and fat; the absence of a single one of these three substances is an insuperable barrier to cellular evolution; and we, therefore, constantly find them existing as well in the tissues of the embryo, as in those of the adult. But a variety of other conditions, essentially injurious to histological growth, may casually arise; and the existence of morbid blastems, which give birth to all tissues endowed with abnormal properties, may easily be conceived as of possible occurrence. Such are no doubt, those very general dispositions of the economy, known under the name of diatheses, and which, when once they have firmly established their hold on a previously sound individual, are capable of being transmitted to his posterity; we must evidently consider them in the light of conditions of existence entirely new, which, in the first instance are accidentally produced (for disease must evidently begin somewhere,) but which when once called into existence, exhibit a strong tendency to maintain themselves in being. Thus, when food, insufficient in quantity, or of an unwholesome kind, has ultimately reduced to a consumptive state an animal previously enjoying perfectly sound health, its offspring often inherits the morbid disposition which, in the parent, was entirely accidental; and syphilis, that well-known and fruitful source of heteromorphous productions, is similarly transmitted from parent to child.

Such pathological dispositions, or diatheses, result from causes various in their nature, but which concur in one point, viz: the disposition which opposes all modifications favorable to the patient's health. Sometimes they are the result of a profound change in the fluids of the economy; sometimes they originate in the introduction of peculiar poisons, which, after having once penetrated into the system, can in no way be expelled; if there existed, for instance, a poison which none of our organs could eliminate, it is clear that after penetrating into the torrent of the circulation, it would nowhere find an issue, and would in consequence become the origin of permanent modification in the economy. The possibility of a similar case may be rationally conceived, by referring to the singular fact already mentioned, that iodine when once introduced into the blood, is not eliminated before a long space of time, on account of the affinity which the salivary glands exhibit for this substance; we have, therefore, in this case an instance of a body which cannot (for a time at least) be expelled from the system; the animal is, therefore, during that period, laid under an iodic diathesis.

Viewing the subject in an entirely physiological light, it may be contended that individuals affected with local cancers are not properly, so to speak, in a state of disease, as long as the organs affected are not altogether essential to life; but when cancer attacks the limbs, the possibility of a surgical cure may at least be presumed, if not expected actually to take place; and the patient is not really diseased—that is to say, life is not directly brought into danger. Thus, when cancer attacks the liver, if a disease is not too extensive, the morbid productions are separated by large tracts of sound tissue, which fulfill, as in the healthy state, their physiological duties; bile is secreted as usual, and grape-sugar exists within the glandular tissue. But when, at a later period, the disintegration of the elements which constitute the morbid production have poisoned in some measure the whole economy, by pouring into the tor-

rent of the circulation fluids, impregnated with the noxious principles, then, indeed, the affection becomes a general complaint, and its nature entirely changes. Cancer is not a diathesis in itself; but the subsequent cachectic state is evidently diathetical.

To conclude the history of these morbid evolutions there yet remains one to be described; and this is imperfect nutrition. It is evident at the present day that the anatomical conditions, brought so prominently forward in Bichat's celebrated work,\* are quite insufficient to explain all the various modes of dying. Experience has taught us that patients often die without offering, in the post-mortem examination, the slightest modification in the anatomical condition of their organs. In the course of our physiological experiments we often see dogs arrived at the very last stage of emaciation, although the appetite continues unimpaired till the last moment. They sink from sheer exhaustion, while the lacteals are gorged with chyle; and, when opened, their bodies offer no trace whatever of pathological alterations.

The latent cause of this singular process is, that nutrition, when considered within the depths of our organs, is, in fact, nothing more than a peculiar mode of evolution. The economy produces within itself substances indispensable to life; glycogenous matter affords us an example of this: formed within the body by a special process, it plays an immense part in histological phenomena. As soon as it fails to be supplied, epithelium is no longer produced; various diseases are the immediate result; and, under similar circumstances, life is inevitably brought to a close. The physiological act called nutrition, comprehends, therefore, two distinct parts: formation of cells is the first; creation of blastems is the second; and the latter is no less indispensable to our existence than is the former; as soon as pathological influences arrest either the one or the other, death is the consequence. There exist, therefore, two distinct modes of dying: sometimes life is cut short at once by an important injury to some essential organ; sometimes, on the contrary, it gradually fails through imperfect nutrition; and this latter termination is the ordinary result of acute diseases, when they prove fatal. In certain cases, for instance, glycogenous matter is no longer produced; and after a given space of time the patient dies, although the appetite remains unimpaired till the last moment. In making the autopsy, the lacteals will be found in a state of repletion; but when analyzed, the fluids of the economy no longer present the slightest vestige of sugar. Death then supervenes, and is the mere result of suspended activity in organs for which proper nourishment is no longer provided.

You therefore see, gentlemen, that to create laws especially intended for the use of pathology, cannot in any case be justified; and that physiology furnishes, in every possible condition of health or disease, a key to the interpretation of vital phenomena. These general notions I look upon as indispensable to the study of particular points: it now remains for us, in order to complete this general survey, to examine the all-important question, "Whether medicines act on a sick patient in the same manner as on a sound individual?" and how far the results obtained in one case are fit to be compared with those observed in the other. It is our intention to examine this subject in the next Lecture: its study is an indispensable introduction to the various investigations we are about to undertake; for, after producing artificially—no matter how—a morbid state in an animal, we shall have recourse to the counter-proof, by seeking for therapeutical agents to effect its cure.

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\*"Recherches Physiologiques sur la Vie et la Mort."

From the Atlanta Medical and Surgical Journal.

**Transactions of the Medical Association of Georgia—  
Remarks on the Pathology of Phlegmasia Dolens.**

BY HAYDEN COE, M.D. ATLANTA, GEORGIA

• • • • •  
NO DOUBT but inquiry has already been instituted in the minds of those who hear me, that, if it is not Crural Phlebitis, what is it, what is the nature of this disease? What its true Pathology.

We believe it to be a reflex disease through the medium of the nervous system, which has its primary seat in lying-in women, in the uterus. The intimate connection between the spine and uterus is manifest no doubt to all of you, from observation, that is, if any irritation is applied to the uterus, as pressure on the os, or disease of the os, it produces more or less pain in the back. The condition of the lying-in woman is such as to be very favorable to the development of this disease at this time, owing to the irritability of the nervous system, which is so manifest at this period. But that this disease is confined to the lying-in woman, or even to females, or to the inferior extremities, we do not believe. Nor do we believe that it is confined to irritation primarily situated in the uterus. We believe that a similar disease, if not identically the same, may arise from irritation of the bowels, long and constantly continued, also from cancer of the breast, as we have some such cases reported.

It may be necessary before we proceed further, to say a few words in reference to reflex action, about which there has been so much said of late, and I trust not without benefit to the profession.

First then, the spinal column is not a mere bundle of nerve fibres for conveying impressions made upon the periphery of the sensitive nerves to the brain, and impressions from the brain through the motor nerves, as was once supposed, but is composed of separate centres, each pair of spinal nerves having their own centre connected by commissures, through which impressions made upon the periphery of the nerves, are transmitted to the brain.

Impressions made on the sympathetic nerve, not only reach the ganglia of that nerve, but are also conveyed from the ganglia situated on each side of the vertebra to these spinal centres, and through them to the brain, precisely as the impressions made on the periphery of the sensitive nerves are conveyed. Reflex action can be effected through these centres in the spinal cord, as well as through the ganglia of the sympathetic nerve. Every tissue has its own peculiar irritability, which is capable of being acted upon by proper stimuli; this stimuli must be applied, in one of two ways, either by the direct application of the stimulus to the tissue itself, or through the medium of the nervous system. Sensibility is not irritability, they are separate and distinct properties, sensibility belongs to the nervous system alone, but may act as a stimulus to irritability.

If we apply an irritant directly to the fibres of a muscle, it acts on the irritability of the muscular fibre, exciting mobility.

Again, if we apply our irritant to the root of the motor nerve, which supplies the muscle, it acts on the irritability of the muscle, exciting mobility in the muscular fibres, precisely as if the irritant had been applied directly to the muscular fibre itself. Again, if we apply our irritant to the periphery of a sensitive nerve, it so acts on the root of the motor nerve, through the nervous centre in the spinal column, as to cause the motor nerve to act on the irritability of the muscular fibre, exciting mobility in the muscle, producing what we term sensori motor action.

Again, if an impression is made by an irritant upon the sympathetic nerve, it may be conveyed to the ganglia of that nerve, and from these ganglia or ganglionic nervous centres, conveyed to the spinal centres, and acts through these spinal centres upon the roots of the motor nerves, precisely as if the impression had been made upon the periphery of the sensitive spinal nerves, producing the same sensori motor action in the muscle. Again, if we irritate the root of a sensitive nerve, or any portion of the nerve between the root and the periphery of the nerve, (the root being connected with the spinal centre,) we have at once a disturbance of sensibility, which acts upon the irritability of the tissue it supplies, precisely as if the irritant had been applied directly to the tissue itself. Lastly, an irritant applied to the periphery of a sensitive nerve, or to the sympathetic nerve, may, through the spinal centre, not only act on the roots of the motor nerves, producing sensori motor action, but so affect all the roots of the sensitive nerves arising from the same centres, as if we were to apply the irritant directly to each sensitive root itself; consequently, increasing the sensibility, or otherwise disturbing the sensibility of these nerves, which act upon the irritability of the tissues supplied by these nerves, precisely as if the irritant had been applied to the tissue itself. Nerve fibres which supply a tissue, if they pass through a plexus, as most of them do, may have their origin in a half dozen centres or more.

We have said, that each tissue has its own peculiar irritability, which was capable of being acted on either by stimuli being applied directly to the tissue itself, or through the medium of the nervous system, as we have endeavored to describe. But to illustrate, if we apply an irritant to muscular fibre, it contracts, but if you apply an irritant to a serous membrane, a grain of sand for instance, we have an increase of its function, which is secretion, with increased sensibility, if applied to the capillaries, they like the muscles contract, if to the mucous membrane, or glandular tissue, we have also increased secretion as the result.

And any agent acting on the sensitive nerves, either directly or indirectly affecting their sensibility, produces precisely the same effect upon the irritability of the tissues which they supply, as if the agent had been applied directly to the tissues themselves.

I have been thus tedious in order to establish the fact, that an irritant applied to the periphery of a sensitive nerve, or to the sympathetic nerve, was capable of affecting the spinal centre from which it arose, or was connected, so as to affect all the roots of the sensitive nerves arising from the same centre, precisely as if the irritant had been applied directly to the root itself, and where a nerve passes through a plexus, it may have its origin in a half dozen centres, as is the case with the lumbar and sacral nerves. But to return to our disease, Phlegmasia Dolens—we said that the primary seat of the disease was situated in the uterus. The uterine nerves are derived from the aortic and hypogastric plexus, with some branches directly from the sacral plexus, an irritant applied to the periphery of the uterine nerves, produces an impression, which is conveyed to the hypogastric plexus, from thence to the lumbar ganglia situated on the sides of the bodies of the vertebra, and from these ganglia to the spinal centres in the lumbar portion of the spinal column, and impressions are conveyed in a similar manner, to the nervous centres in the sacrum, or more directly, by impressions on the peripheral branches of the sacral nerves distributed to the uterus, affecting these centres, so as to produce the same effect on the roots of the sensitive nerves as if the irritant had been applied to the root itself, and as a result, the sensibility of these nerves, arising from these centres, is greatly increased, and now acts as a stimulus to the irritability of every tissue to which they are distributed. Just precisely what occurs in Phlegmasia Dolens.

We can now account for the extreme sensibility of the whole limb, and why every tissue of which the limb is composed, seems to be disordered. The nerves arising from these spinal centres are distributed to every tissue of which the limb is composed. The roots of the sensitive nerves being affected in the same manner as if the irritant had been applied to the root itself, the sensibility is greatly increased, and this extreme sensibility acts as a stimulus on the irritability of each tissue of which the limb is composed, precisely as if an irritant had been applied directly to each tissue, producing precisely the same result, that is, acting on the muscles, causing them to contract, on the capillaries causing them to contract, on the areolar tissue, causing an increased secretion, producing an effusion as the result, and even the coats of the veins and lymphatics may be in an irritable condition. This is precisely what would occur, if an irritant had been applied directly to each one of these tissues, and is the condition in which we find the tissues of the limb, affected with Phlegmasia Dolens. We can now account for the exquisite sensibility of the whole limb. We can now account for the acute pain in the calf of the leg, and why the muscles feel so hard, as if impacted against the bone, as if in a state of tonic contraction, which they are, so much so, that you cannot move them. There are four or five large muscular branches of nerves distributed to these muscles, in this injured condition of their sensibility, which acts as a powerful stimulus on the irritability of these muscles, putting them in this painful and contracted condition, which we find. Sometimes we find the large muscles about the hip and thigh in a similar condition.

We can also explain why the limb looks whiter than natural, as we know it does in this disease. The increased sensibility of the nerves acts on the irritability of the capillaries, causing them to contract, preventing the usual amount of red globules from entering these vessels. We can also account for the nature of the fluid—it is not common serum; it is an exhalation from the excitant in the areolar tissues, as we know is the result when an irritant is applied to a fibrous membrane; this is the reason why it is lymph instead of serum, as we know it is by the limb failing to pit only in the last stage of the disease, after the excitement has ceased. Another proof of its being lymph, is, the swelling seldom, if ever, commences in the foot.

The swelling is produced by the contraction of the muscles, and the effusion.

We can readily account for the cord, which is sometimes found in the region of the crural veins, and so much relied on by the supporters of Phlebitis. The vessels are surrounded by an abundance of loose areolar tissue, besides, they are enclosed in a fibrous sheath; these, like another fibrous tissue when irritated, throw out lymph, producing infiltration of this fluid in these tissues, producing the cord.

We can very readily see why in a few instances, perhaps, all that prove fatal, the inflammation might extend from the sheath to the fibrous coat of the vein, and from the fibrous coat to the serous coat, and as the result, prove fatal, for we think the inflammation commencing in the sheath, could as easily extend to the serous membrane, as for inflammation commencing in the serous membrane to extend to the sheath. We can also account for the inability to move the limb, which occurs in this disease, even after the sensibility has subsided.

We can account with more plausibility, for the manner in which both are sometimes affected, by the irritation extending from one portion of the nervous center to the other through its connecting commissure. Another proof of our theory is, its results, it seldom ever proves fatal; perhaps, never, unless the inflammation extends from the sheath of the vessels to the serous membrane. The treatment of this disease, is a farther proof of our theory of the pathology of this disease; stuping the limb with flannel wrung out of hot vin-

egar, enveloping the whole limb, is much better calculated to relieve increased sensibility and irritability of the tissue, than sudden phlebitis; as we see it does when effectually applied; also bathing the limb in volatile linament and laudanum, is another remedy that would relieve irritation, and there is some reason for such a course of treatment, as is adopted in the treatment of this disease, with the view we take of its pathology. But if it is phlebitis we can offer no reason in the world, why such a course of treatment should be successful or even beneficial. One important point in the treatment of this disease is to allay the irritation in the uterus, by using mucilaginous washes with laudanum. I have also used quinine combined with an opiate with decided benefit in this disease. A similar disease may occur in the superior extremity, from cancer or disease of the breast, by an impression made on the periphery of the thoracic nerves, which is conveyed to the nervous centres in the spinal chord in the cervical region, also a similar disease has been produced in protracted cases of typhoid fever, the primary seat of which, no doubt, was located in the mucous membrane of the bowels; several cases are referred to by Dr. Tweedie, the explanation of which would be similar to the one I have already given and as I have been much more tedious in my explanation than I anticipated, I will close, hoping this subject may be more thoroughly investigated.

THE RATE OF MORTALITY OF THE CITY OF LONDON.—The population of London is reckoned at 2,774,000; and it is still increasing at the present rate of 1000 weekly—30,000 by births, and 23,000 by immigration. The females exceed the males by about 175,000, because it has more female immigrants, and because man's mortality, by reason of his occupations, is greater than the woman's. Of 1,394,900 inhabitants of the age of twenty and upwards, in the last census about 750,000 were born beyond the bounds of London. It is a vast stage upon which the people of these isles play their part, and then retire to country life, to foreign lands, or to the life beyond the grave. 92,500 children were registered as born during 1859, i. e. 1780 weekly, or 254 per diem—the boys exceeding the girls by 1822: 61,600 died, death taking them off at the rate of 1185 per week, or 7 per hour. The mortality was at the rate of 22 in 1000, while it was 24 in 1000 during the previous eighteen years.

To show the marked difference between the death rate in the seventeenth and nineteenth centuries, the Registrar-General has given us some very interesting details; and it appears that the comparison may be relied on as tolerably correct. In the 20 years, 1660—79, the death rate was 7000 in 100,000; in 1859, it was 2229. Small-pox took off 357 in the first period, and 42 in the second; fever, 749 and 59 in the two periods. In those days, 86 died in childbed, now 17 die in the 100,000. Now 8 die of dysentery, then 763 died. Syphilis was twice as fatal then. Scurvy also took off its 142 instead of 2 as now. Respiratory diseases were very fatal; 1079 then, against 611 now. Convulsions and teething carried off 1175; and now (sadly still too many) carry off 136. Besides this, in those days were visitations of the plague—in 1665, for instance, nearly one-third of the population perished by plague.

Some few exceptions are worthy of note, however, in this category. Apoplexy, paralysis, affections of the brain, and suicide are more than double as fatal now as they were then. Stone, and diseases of the urinary organs, are as fatal now as they were then.—*Medical Times and Gazette.*

From the North American Medico-Chirurgical Review.

## On the Use of the Hypophosphites of Soda and of Lime in the Treatment of Phthisis.

BY RICHARD QUAIN, M. D.

IN THIS article Dr. Richard Quain states his experience in regard to the use of the hypophosphites of soda and lime in the treatment of phthisis, as recommended by Dr. J. Francis Churchill, of Paris, in a communication read before the French Academy of Medicine in July, 1857. After reviewing Dr. Churchill's theory on the pathology of phthisis, and on the mode of action of the hypophosphites in this disease, the author continues as follows:—

"Encouraged by statements like this, and by a lengthened catalogue of the phenomena of improved health, which it was said resulted from the use of those remedies in Dr. Churchill's hands, I determined on giving them a fair trial in a certain number of cases. They were, therefore, administered in twenty-two cases, taken, without selection, from among the ordinary in-patients of the Hospital for Consumption, at Brompton. Of this number (twenty-two) twelve were males, and ten females.

"*The stage of the disease.*—Two cases were in the first, ten in the second, and ten in the third stage of phthisis.

"*The dose of the remedy.*—Dr. Churchill recommends ten to thirty grains as the dose, of either the hypophosphite of soda or of lime, daily, in a simple fluid. The dose to be increased until the general symptoms disappear. In some cases he prefers the one salt to the other. For example, he thinks that the salt of lime checks the expectoration, and thereby increases the cough; while the salt of soda is less energetic in its action. I met with nothing confirmatory of this impression. The dose given to the patients at Brompton was, in the first instance, ten grains, three times a day, except in the case of a child, where only five were given. The disease progressing, or being stationary, or the effects of the remedy being *nil*, the dose was gradually increased. Thus, in four cases, it was increased to a drachm three times a day; in ten cases, the dose reached two scruples or more; in eight, the dose remained under half a drachm. It will thus be seen that the remedy was given freely. In no case, let me add, was there any appearance of the troublesome symptoms indicated by Dr. Churchill as following large doses.

"*The duration of the treatment.*—One case was under treatment for six months, one for four months, six for three months, nine for two months, five for one month. During this lengthened course of treatment, I looked anxiously, but in vain, for those marked physiological effects described by Dr. Churchill. There were no evidences of the "improved powers of innervation;" "the hair and nails did not grow more rapidly;" there was no "appearance of plethora or of fullness;" the patients did not describe "an unaccustomed sensation of feeling better and stronger after a few doses of the remedy." Nay, I would say that there was nothing more felt by the patient, nor noticeable by the physician, than if so many grains of carbonate of soda or prepared chalk had been taken.

"*The results.*—To return, then, to the more immediate object for which these agents were administered, viz., to ascertain their value in the cure of consumption, I have to state, that of the twenty-two cases, six were more or less improved while under treatment. Of these six, three were improved in but a slight degree, and only for a short time; in three the improvement was marked, but in one only of the latter has the improvement been permanent; of the two other cases, one continued using the hypophosphite for three months after leaving the hospital, during which time, she grew gradually weaker, and finally died; the other, a man, after leaving the hospital, contin-



ued the treatment for some time, but gradually grew worse, and is now dying. All the other sixteen cases steadily lost ground while using the hypophosphites in the hospital. Happily, in six of these cases, the treatment by hypophosphites was suspended, and the usual treatment by cod-liver oil, tonics, etc., being substituted, a decided improvement in each was the result."

In order to illustrate the chief features of the treatment by the hypophosphites, the author reports the history of seven cases, including the three in which alone any useful result *seemed* to follow the treatment. At the end of his communication he states the *conclusions* at which he has arrived, in the following words:—

"Reviewing the cases of which the preceding may be said to be types, we see that of twenty-two individuals laboring under phthisis, submitted to the hypophosphite treatment, sixteen derived no benefit whatever; in three the benefit was so slight and temporary as scarcely to deserve notice; in two the improvement, though marked, was temporary; and in one case the result has been satisfactory and permanent. Small as the therapeutical powers of the hypophosphites are shown to be by these facts, are we justified in assigning to them even thus much? I think not. For we cannot forget that our cases are hospital cases; that, oppressed by sickness, care, and anxiety, they come from close, unhealthy localities; that they were more or less destitute of good food and good air. When they enter the hospital, they begin to feel the influence of hope; they live in warm, airy, and well-ventilated wards, find agreeable occupations, and have plenty of good food. Under such circumstances, the patients frequently improve in health, without the application of any medicinal agents. It would therefore be as fair to attribute the slight or temporary improvement which took place in some of these cases to hygienic as to the therapeutical agencies. Nay, further, this opinion is confirmed by the fact that two or three cases which did best in the hospital ceased to do well when they left it.

"Desirous of otherwise testing the value of these substances, I thought it would be well to compare the results of my ordinary hospital practice with that of the hypophosphite treatment. With this view, I requested my friend and late clinical assistant, Dr. Hill, (to whom I am indebted for much assistance in this inquiry, and for the notes of the preceding cases,) to make abstracts of any twenty-two successive cases in the hospital books. He did so, and having ascertained the results of the treatment in these cases, I find that he has given me notes of eleven males and eleven females, of whom three were in the first stage of the disease, five were in the second, and fourteen in the third. It will be remembered that twelve were in the first and second stage, and ten in the third. Thus in the former cases, the advantage was in favor of the hypophosphite cases, so far as the stages of the disease were concerned; nevertheless, we find that of the cases submitted to other treatment, sixteen were more or less materially or permanently benefited, while in six only did the disease progress unfavorably. Exactly the converse was the case when the hypophosphites were given. Thus there were sixteen of twenty-two cases unrelieved. This comparative evidence is further strengthened by bearing in mind that six of the cases in the former series, which were unrelieved by hypophosphite treatment, did well subsequently under other treatment.

"A review of the preceding facts has led me to form a most unfavorable opinion of the value of hypophosphites in the treatment of phthisis. I believe them to be comparatively, if not absolutely, useless. I have been induced to take some little pains in investigating the subject, because of the unhesitating confidence with which their value is asserted and their use recommended in certain quarters, and I have also seen in the cases of some patients who have visited Paris, how much time has been thrown away by substituting the use of these salts for remedies of undoubted efficacy in controlling the progress of phthisis."—(*London Lancet*, March 17th, 1860.).

From the New Orleans Medical and Surgical Journal

### Do Bad Smells Cause Disease.

LETTER FROM ALBERT NAPPER, ESQ.—Sir: This is a question more easily asked than answered, but as it now becomes a question involving the credit of our profession, it behooves us to return a speedy and decisive reply. The subject has latterly much occupied the attention of the medical profession, as well as of the public, and as is usually the case with all popular subjects of a scientific character, has been taken up with a certain amount of prejudice, resulting in the notion that many diseases do arise from bad smells.

Without going the length of asserting that this never does occur, my observation has confirmed me in the opinion I expressed in a communication inserted in the *Journal* of the 15th of November, 1856, in reply to some remarks of the Registrar-General on the subject, in which I stated my conviction that zymotic diseases are not the result of merely offensive exhalations, so much as of those arising from the products of fermentation and putrefaction, whether with or without smell. I have since had reason to modify this last opinion, and concur with that of Dr. Watson (which I had not seen, before reading it in your leader)—“that neither animal nor vegetable decomposition is sufficient to generate fever of any kind”—I am, however, far from admitting that fevers are not affected, and most materially affected, although not *generated* by them. I have long urged on my poorer neighbors the doctrine that the “bad smells” arising from the cesspool under their windows, which have been endured so long with impunity, were only waiting for the seeds of fever to be sown in the system of some member of the family, to convert that which otherwise might pass off as a mild form of fever, into the most fatal kind of typhus. It appears to me that fever, of whatever type, must, by some, at present, unknown agency, be in the first place implanted in the system, where it will flourish or decline in proportion to the capabilities of the tissues in which it is engendered to support it, and that these exhalations bear the same relation to the various types of fever as guano and phosphate of lime do to wheat and turnips. I have also remarked, that typhus and remittent fevers appear to be nourished by the emanations of the cess-pool, and by those gases proceeding from the fermentation of stagnant water exposed to atmospheric influences. Intermittent fevers and ague depend on the exhalation of water (let it be ever so pure) contained in the soil, but not exposed to the air. Synochus, synocha, and the milder forms of fever being of the same character as typhus, are probably under the same but modified influences.

The thanks of the public are due to Dr. McWilliam for the attention he has bestowed on the subject, but I fear the consolatory feeling of security his statement will engender, may have the effect of turning the tide of public opinion to a do-nothing policy, if not judiciously directed by those best qualified to arrive at correct data, and for the medical profession to maintain this position, it will be necessary to lay aside those extreme theoretical views in which the leaders in some of the branches of medical science have of late years indulged, much to the prejudice of the whole body. Although as yet the disease adapted to be nourished by the filthy effluvia of the Thames has not appeared, the time may not be distant when its destructive powers may be too surely established. I would therefore urge on my fellow practitioners, even though like myself, occupying the humble position of a “village doctor,” the necessity of bringing their practical knowledge to bear on this, as yet obscure, but most important subject.—*British Med. Jour.*, Sept. 24, and Oct. 15, 1859.

**FATALITY FROM CHLOROFORM.**—Dr. Kidd, who has given much attention to the subject of chloroform, has observed that deaths attributable to its inhalation have occurred more frequently during the performance of the minor surgical operations. The statistics of death from chloroform certainly show a much greater proportion in the performance of trifling operations, as of eighty-five fatal cases in which the nature of the operations was recorded, ten were extractions of teeth, fourteen removals of toe nails and operations on phalanges, while of this number none occurred in the performance of the large amputations, resection or ligature of large arteries, etc.

Dr. Kidd has therefore hastily concluded from these results, that "chloroform is safer in large than in small operations." He seems to have overlooked the fact of the vastly greater frequency of the performance of small operations, and of course the more frequent administration of the anæsthetic, which is, we believe, sufficient to account for the apparent greater fatality attending minor operations.

Dr. Kidd estimates the number of deaths from inhalation of chloroform to be about one hundred. We think that if this number had been quadrupled it would more nearly approximate the truth. Chloroform never gained general confidence in this country, and its use has within the past few years rapidly declined, yet the deaths referable to it would probably equal one half of Dr. Kidd's entire estimate of fatality from it.

The European origin of chloroform inhalation and its distinguished authorship, has given it a confidence which cannot long be maintained in the face of such uncontrollable mortality, and while the causes of sudden death from it are so little understood.—*Philadelphia Med. and Surg. Reporter.*

**ON THE EMPLOYMENT OF SANTONINE IN AMAUROSIS.** By M. Martini. (*Comtes Rendus*, No. xi. March, 1860.)—M. Martini, in 1858, communicated a paper to the Académie des Sciences on the effects which santonine exerts upon the coloration of the vision and the urine. In the present communication, containing additional observations upon the same subject by himself and others, he gives an account of the results of his employment of santonine in ocular neuroses. Only three cases are referred to, the most meagre details being given:—1. A woman, 70 years of age, had suffered for some time with defective vision of the left eye, when M. Martini saw her in March, 1859. The pupil was but slightly sensible to light, and was larger than that of the right eye. A slight white cloud was perceived in the aqueous humor, and the patient could scarcely distinguish light. On March 10th, the santonine was commenced, with from four to six grains being given, (how often is not stated,) and on the 15th the patient perceived, several times in the day, objects of a greenish-yellow color, and that even with the bad eye. On the 18th eight grains were given, and the patient began to be able to recognize the countenances of the bystanders. By the 22d objects were observed to be colored yellow, and had become still more plainly distinguishable. The employment of the santonine having been now discontinued, the improvement remained stationary. 2. The santonine having been administered from March 20th to 22d, to a patient amaurotic in both eyes, the retina became much more sensible to the action of light. 3. To a man who suffered from amaurosis of the left eye, being already deprived of the right one, ten grains of santonine *per diem* were given. In a week's time he was enabled to read some large letters written on a wall.—*Philadelphia Med. and Surg. Reporter.*

**THE EXPIRED AIR.**—At a session of the Academy of Sciences during the last year, a prize of 5,000 francs was awarded to M. Doyere for his researches upon the composition of the air expired by *cholériques*, and upon the temperature of patients during the last moments of life. M. Doyere has recorded in this memoir the analysis of 209 products of expired air, of which 170 were from *cholériques* and 39 from men in health. Each analysis comprehends the ascertainment of the oxygen consumed and that of the carbonic acid produced. Previously, in 1832, M. Rayer had announced that the air expired by *cholériques* contained more oxygen than in the normal state. M. Doyere has confirmed this result, and has given the following details: He has seen in no case the absorption of oxygen reduced to zero; he has never seen that the air expired contains as much oxygen as the air inspired; but he has established, in the severest form of cholera, that there is most oxygen in the expired air. As for carbonic acid, M. Doyere has constantly met with a notable decline in the proportion of this gas in the expired air of *cholériques*, the mean of which is no more than 1 to 100.

Nevertheless, one may, by analyzing these products of expiration, measure the severity of the disease. Thus among *cholériques* who are promptly cured, the oxygen absorbed never falls below the proportion of 3 per centum, nor the carbonic acid exhaled below that of 2.3. On the other hand, M. Doyere has never seen a patient recover after the analysis had shown a fall of the former gas to 1.75 and of the latter to 1.45, even in such cases where the amelioration of the symptoms had given rise to great expectations of recovery.

Notwithstanding the diminished activity of the respiratory function, notwithstanding the little combustion of the carbon, the temperature of the body does not a little increase into a notable manner; and then, when nothing escapes from the lungs but a small quantity of carbonic acid, yet in this physiological state one witnesses a temperature in the axilla of 40 degrees C. and over. At the approach of death, when the circulation is embarrassed and becomes arrested, when the respiratory function becomes every moment less active, the axillary temperature augments among *cholériques* to the elevated point of 43 degrees C., that is to say, it then attains a maximum to which it rarely rises in febrile maladies during their periods of greatest heat. At the moment when death is taking place, the singular phenomenon of the ascension of temperature ceases abruptly. [This does not occur in choleraic cadavera in New Orleans.]—*New Orleans Medical and Surgical Journal*.

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**WHAT THEY THINK OF US IN PARIS.**—We all of us, I fancy, are guilty of the vanity of looking in the glass once in a while, if only for the purpose of refreshing our memories as to "what manner of men" we are. The following reflection, therefore, upon our professional faces, from the *Archives Generales de Medecine* of April, may not be without interest to some of our readers. In a notice of Noeggerath and Jacobi's Contributions to Midwifery, &c., the *Archives* says:—

"We are so much the more disposed to encourage the experiment of our confreres in New York, as they thus furnish us a much more easy access to American Medical literature, distributed over their provincial publications, of which the greater part are as yet, and will remain for a long time, unknown to us. It is no more than justice to the medical writers of America, however, to say, that they are seeking more and more to establish scientific relations with Europe and even with France, of which they have known nothing until within these last years, except indirectly, and through the medium of English

Journals. (!) Science cannot but be a solid gainer by this, and professional morality will also find its advantage in it. America has, in this respect, a reputation to make, and still more to *unmake*. She has passed for a long time for a country of romantic observations, of adventurous experiments, of a surgery without pity, or a medical practice full of perils. At the present day its rashness is getting calmed, but there are not wanting yet daring experiments, which have no other possible excuse, except that, in default of success, they serve at least as a warning."

*Fas est ab hoste doceri*, and this in any sense, even to learning to know ourselves. Is this reflection from the Parisian mirror a true "presentment," or is it a *little* distorted? At any rate, we think Mons. Vattermare, when he next makes a visit to America, had better turn his attention to a more complete system of medical exchanges.—A.—*Boston Med. and Surg. Journal*.

STATISTICS OF MORTALITY BY PHTHISIS.—At the annual meeting of the Geographical and Statistical Society of New York, a paper upon phthisis was read by Dr. Henry B. Millard. As some of his conclusions are interesting in connection with those arrived at by Dr. Bowditch, of this city, we republish them here. We call attention particularly to the effect of a moist atmosphere as favorable to the generation of the disease.

"He estimates that nearly one-sixth of the deaths among the human race occur from consumption. From statistics extending over a considerable period, he found that one death in every 5 7-10 occurred from consumption. In New York, from 1804 to 1820, one death in every 4 3-10 was caused by consumption; from 1820 to 1835, one in 5 4-10; from 1835 to 1850, one in 6 5-10; 1848 to 1859, one in 8 46-100; in Brooklyn, 1848 to 1859, one in 8 11-100. Of deaths in the army, he found that the greatest number of cases of consumption was from 6 9-10 to 9 2-10 annually for every thousand men, between latitudes 36 deg. and 25 deg., characterized by high temperature, copious rains and excessive moisture. The smallest number of deaths was 1 3-10 per thousand men in New Mexico, characterized by high land and dry atmosphere. While consumption is rare in countries of high latitudes, it is curious that in tropical countries the proportion of deaths is often too small to be calculated. In all Judea, in forty-three years, only 20 died of consumption. The theory that the sea air may prevent, as well as cure, consumption, is supported by statistics. In the British army, out of 14,590 men, 51 died of consumption; while out of 12,942 men in the navy, only 19 died of that disease. Consumption is not necessarily more prevalent in large than in small cities. Among the trades and professions, the following order of mortality by consumption was mentioned. The greatest was amongst tailors, shoemakers; next came blacksmiths, gardeners, bakers, butchers and lawyers. The mortality among tailors was four times that of the lawyers. The greatest mortality by consumption among males is said to be in the city. There is greater liability to consumption between the twentieth and thirtieth years of age than at any other period of life. The general conclusion was that humidity of the atmosphere is favorable, and dryness unfavorable to the generation of the disease, but moist salt water is not calculated for its development. Want of exercise and air tends to produce it; lack of light does not. It is more prevalent among females than among males. There are no reasons for the conclusion that the disease is either on the increase or decrease."—*Boston Med. and Surg. Journal*.

## Communications.

### On the Climate of California in its relation to the Treatment of Pulmonary Consumption.

BY JAMES BLAKE, M. D., F. R. C. S.

THE increasing importance that more correct views on the pathology and treatment of phthisis, is daily attaching to the subject of climate in its relation to this disease, has led me to offer some few remarks on its treatment, in connection with the advantages that the climate of California offers, for carrying out the only rational means which, I believe, affords any hope of successfully treating the disease. An impression, founded on imperfect observation, has obtained, that there is something very prejudicial in our climate to consumptive patients. There can be no doubt but that a full proportion of our deaths are caused by phthisis, but I think this is to be attributed more to a large number of persons with a phthisical tendency, or even with the disease fully developed, having emigrated to our State in the hope of deriving benefit from the voyage and change of air, than to anything in the climate favorable to the development of tubercular disease. The habits of our population, so intensely devoted as they are to money-making, lead them to neglect the most common hygienic measures, and consequently tend to favor the development and fatal termination of the disease. And again, if phthisis is to be treated by expectorants, sedatives, tonics, and warm and comfortable rooms, our patient must die, even if the field of our practice had been in the garden of Eden. That pulmonary consumption, when once fully developed, can rarely, if ever, be cured by drugs, is a fact which experience is daily confirming, notwithstanding the specifics that are being constantly published by professed and medical quacks; but my faith in the curability of the disease is not at all diminished, although I have watched the failure of all these boasted specifics, from St. John Long's longissimus-dorsi liniment to Dr. Churchill's hypophosphites. The more I have seen of the disease, the more I have been impressed with the impossibility of curing it with drugs, but at the same time, the more am I convinced that a large portion, even of those cases that have advanced to the second and third stages of the disease, are curable, and that there is not another spot in the civilized portion of the globe where their treatment can be undertaken with the hope of success as in California. Such is the result of my own experience in the treatment of the disease in this country, and I shall be able to show that these facts, furnished by experience, are in accordance with the more correct

views that have been advanced during the last few years, on its pathology. It is now generally admitted that pulmonary consumption is not a mere local disease—that the deposition of tuberculous matter in the lungs is but the expression of a state of the system, brought about by the mal-assimilation of food, and although neither physiology nor pathology has succeeded in pointing out on what this mal-assimilation in individuals with a tuberculous tendency depends, yet the progress made towards a successful treatment of the disease by referring it back this one step—from the lungs to the digestive organs—is most important. If we now consider what are the principal indications to be followed in the treatment of a confirmed case of phthisis, according to our more correct pathological views, we shall have abundant proof of the advantages we possess in our climate of combating it with every prospect of success. The first great indication is to restore the functions of the digestive organs. To effect this, there is nothing to be compared to exercise and living in the open air. If the weather will permit, let the patient live in the open air; if he is not strong enough to walk, let him ride on horseback; if he cannot do this, let him go in a carriage; if he cannot bear exercise for more than ten minutes at a time, this is enough to begin on. Avoid over-fatigue, but persevere; ten minutes' exercise every hour, or every two hours, will soon enable him to stand more; the more out-of-door exercise he can take, the more will the digestive powers become improved, and the more rapidly will strength be regained. During the summer months, if possible, let him camp out, sleep out under a tree, without tent or roof, save that of the spreading boughs. This is the most powerful means we possess for improving the digestive powers, and it is astonishing how well draught-fearing, cold-catching, coughing patients can stand it. I had patients sleeping out on the coast range, with unthawed snow still below them, during the inclement weather of our late extraordinarily cold June, without catching the slightest cold, without, as they informed me, so much as a sneeze, and with marked improvement in their general symptoms. The resistance to any ill-effects from cold and wet which can be attained by living in the open air, would seem almost incredible to those who have not experienced it. Shortly after leaving England, in bad health, and at a time when I dared scarcely put my feet on a damp pavement without the certainty of an attack of catarrh, I made a trip beyond the western frontier of Texas, and had to pass more than one night drenched with rain, the water pouring under our blankets, and yet I experienced not the slightest ill effects. Those who have crossed the plains to this country can not but be aware how exposure to wet and cold can be safely endured when camping out. But this is merely a collateral, although a most important advantage to be attained in the out-door treatment of consumption. The most important point gained is the rapid improvement that living in the open air produces in the digestive functions. Those who have not gone through a course of open air for the cure of dyspepsia can realize it. Many instances have come under my observation, in which individuals, laboring under some form of irritable dyspepsia, yet living perhaps in favorable hygienic conditions, taking regular exercise, living on

wholesome diet, and yet to whom a piece of fat bacon would be an abomination, and almost a poison; yet turn these dyspeptics out in the mountains, packing their blankets and provisions on their backs, and in the course of a few days they will be able to digest, and not only to digest, but to relish the fattest bacon that was ever made in Ohio: they will even be unwilling to lose the grease that drops from the luscious morsel as it broils before the camp fire, robbing the ashes of their perquisites by catching the hissing drops on their hard bread, which they then can eat with increased gusto. That these are facts I know by personal experience, and although they might appear to be trivial under a general point of view, yet they become invested with vital importance, when the state of thousands of our fellow-beings is dependent on their recognition and appreciation. What else, I would ask, is there that would produce such improvement in dyspeptic patients in so short a time, or even in weeks, or months? What have we amongst our bitters, our tonics, or all the drugs in the pharmacopœa, that will begin to compare with out-door life in strengthening the digestive organs? and why is it that this powerful means of striking at the root of the disease, of producing that change in the condition of the system that alone can lead to a hope of ultimate recovery, has been so generally neglected? Admitting phthisis to be dependent on mal-assimilation, why has the profession, as a body, ignored a remedy which I believe to be as complete a specific in restoring the assimilative powers as is quinine in ague, or, at any rate, it is one that far surpasses every other. I am aware that consumptive patients are frequently sent to Madeira, to Havana, to the Southern States, and to the Sandwich Islands, for change of climate, and in some instances benefit has been derived from the change, more, however, I believe, from the amount of out-door life that has thus been incidentally enjoyed, than from there being anything in these climates directly favorable to removing the cause of the disease; on the contrary, I think all of them are inferior to California and Western Texas for consumptive patients, and some of them, particularly Havana and the Southern States, are positively injurious, as far as regards the main object to be aimed at—the strengthening of the digestive organs. The complete immunity of our climate from rain during so many months of the year, the dry, bracing air of our mountains, so completely free from every taint of malaria, affords us facilities for carrying out the open air treatment of phthisis, which are to be found in few places in the civilized portions of the globe, particularly in the temperate zone; and those who regard California as unfavorable for consumptive patients, must have entirely ignored the importance of living in the open air as an element in curing the disease. As a general rule, patients may live in the open air with perfect safety from the middle of May to the middle of October; or, if some protection from rain should be required during that period, it certainly would have to be used but during a few days. During the winter months patients would have to avail themselves of houses; but even then a large portion of their time can be passed in the open air, as there are few temperate climates where, even during the rainy season, there are so many clear days as in California.



I must reserve, until I allude to the pharmaceutical treatment of the disease, any remarks on the medicines that may be required in some cases for strengthening the digestive organs, and will now shortly point out the advantages afforded by the open air treatment in allaying or moderating some of the other symptoms that are so frequently met with in cases of phthisis. I have already alluded to the increased power of resistance to atmospheric changes, which is attained by living in the open air; this is an important advantage, as it preserves our patients, in a great measure, from those intercurrent attacks of sub-acute pneumonia, which so often favor the development of tubercle. The irritability of the bronchial and laryngeal mucous membrane becomes diminished, so that the cough is reduced in frequency, until it is no more than is required for clearing the lungs of their secretions. That this can be effected without nauseating expectorants, or anti-digestive sedatives, is a great gain, as our patients thus secure rest for their sore lungs, and good sleep without their stomachs being interfered with. The excessive nervous irritability that, independently of cough, frequently interferes with sleeping, is more effectually allayed by living in the open air than by any other means; the soothing influence of exercise in the open air on an irritable nervous system, is an universally acknowledged fact, and of all sedatives, it is that which is most appropriate in cases of consumption. The night sweats, as a general rule, are checked by sleeping in the open air, or in thoroughly ventilated rooms; although this is a symptom against which we are frequently obliged to administer medicines, fortunately they can be selected from amongst substances that rarely interfere with the digestive functions. I must reserve for a future article a short synopsis of the pharmaceutical treatment of the disease, and also the details of the manner in which the most important element of our treatment, the hygienic, can be carried out. It is often difficult to induce the more civilized class of our patients to fall back to the nomadic state. Many cannot do it; their social position will not allow it. Many will not from fear that they must die if they get five miles from an apothecary shop. Obstacles will present themselves which cannot be overcome, and in which a compromise must be effected. As my object is to point out how phthisis can be cured, and not merely the principles on which it is curable, I will endeavor, in a subsequent article, to show how these compromises can be best carried out, so as to give every class of our patients a fair chance of recovery. I shall also review the subject of the varieties of climate to be found in our State, and of the best localities for our patients at different seasons of the year.

SACRAMENTO, July 13th, 1860.

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### Complications of Scarlatina.]

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BY H. H. TOLAND, M. D.

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BRONCHITIS is not an unfrequent complication in violent cases of scarlatina, and varies both in extent and intensity, according to the constitution of the patient and the exciting causes by which it is produced. Usually, soon after the disappearance of the eruption, a slight hoarseness is observed, accompanied with a cough more or less troublesome. Sometimes, after the continuance of the symptoms above specified, for a few days the expectoration becomes more abundant, the cough and hoarseness both disappear, and the patient recovers rapidly. More frequently, however, soreness or pain in the chest is complained of, fever returns or increases if it had not disappeared, accompanied either with a sibilant or mucous rale, a violent and distressing cough, and sometimes great difficulty of breathing, a small and rapid pulse, and a discoloration of the face in consequence of the function of the lungs being impaired by the minute ramifications of the bronchial tubes becoming implicated. Such cases are fortunately rare, although I have met with two of vesicular bronchitis in which all the symptoms existed in an aggravated form.

J. R., aged five years, a strong healthy boy, was attacked June 1st, 1860, with the anginous variety of scarlatina. On the eighth day, after the disappearance of the eruption, being exposed to a current of cold air after remaining two or three hours in a room heated by a cooking-stove, he became chilly, which was followed by fever, hoarseness and cough. Flannels wet with warm vinegar and covered by oiled silk, were applied both to the anterior and posterior surfaces of the chest, and a mixture composed of pot. nit., vin cochici semin, tinct. aconite, rad. syr. scillæ, and syr. simplex, was given every two hours. In the morning the lips were livid, pulse 160, respiration difficult, and the sibilant and sonorous rales could be heard in every portion of the lungs, obscuring the respiratory or vesicular murmur. The urine had diminished in quantity, and presented a dark appearance, as if it were mixed either with coagulated or venous blood. Although opposed to blistering young children for the removal of any of the complications of scarlatina, the counter-irritant previously prescribed being entirely ineffectual, the lateral and anterior portions of the chest were blistered by the application of Bullin and Birt fluid, and the same treatment continued with frictions of ol. terebinthinæ over the region of the kidneys, and two grains ammoniæ carbonas, in syrup, between every dose of the other mixture. This was prescribed both as a stimulant and diuretic, and is exceedingly useful in all the asthenic complications of scarlatina.

By the following day, a change had occurred for the better, although three or four days elapsed before it was very decided, and did not occur until

the mucous rale or rhonchus predominated, when the cough became so constant and distressing as to require the administration of Dover's powder at night to afford relief and produce sleep.

Anasarca followed the bronchial difficulty, and was relieved by the use of ammoniæ, the diuretic mixture, California port wine, as previously recommended and administered, with generous diet.

Pneumonia, although not so frequent a complication as inflammation of the large bronchial tubes, it occasionally occurs, and presents the symptoms of the sthenic form of the disease; notwithstanding, the asthenic variety is much more frequent. If a patient be carefully examined soon after the supervention of this difficulty, besides the uneasiness in the chest and increase of fever, the extremities are frequently cold, and one or both cheeks flushed, which may alternate with unusual pallor. Respiration is always hurried, and occasionally difficult, although nothing can be detected by auscultation, except puerile respiration in the diseased portion of the lung. This is, however, soon followed by a crepitant rhonchus, considerable cough, and the expectoration of blood either pure or mixed with mucus, which changes in a few days to a brick-dust or yellowish color, and often resembles bile more than blood. When the lung becomes solidified or hepatized by the excessive engorgement of the vessels, the vesicular murmur and crepitant rale which were so distinct, disappear in consequence of the entire exclusion of the air, and might be mistaken for empyema if it were not for the absence of ægophony, which indicates the existence of that difficulty. The chest over the diseased lung transmits a dull sound on percussion, which does not disappear until the bronchial tubes become pervious.

M. H., a female, aged seven years, delicate but healthy, was attacked with scarlatina, December 3d, 1859. After suffering excessively for six or seven days from difficulty of breathing resulting from ulceration and swelling of the throat, accompanied with violent fever and irritability of stomach, the unfavorable symptoms began to subside, and hope was entertained of a speedy recovery, when, on the tenth day she complained of hoarseness and pain in the chest. She was greatly prostrated, pulse small and 140 per minute, breathing difficult, and expectoration bloody. The dry crepitant rale could be distinctly heard over the inferior and lateral portions of the right side of the chest, although no part of the lung appeared to be entirely hepatized. Bullin and Birt's blistering fluid was applied over a surface at least six inches square of the affected side, followed by the warm water dressing. The following mixture alternated with 3 grs. carb. ammon., was given every two hours:—R. pot. nit., 1 drm.; tint. aconite rad. acid hydrocy., gtt. xii.; syr. scillæ,  $\frac{1}{2}$  oz.; syr. symp., 1  $\frac{1}{2}$  oz.; and in consequence of the red color and great diminution of the urinary secretion, ol. terebinth. was applied over the region of the kidneys, and an anodyne administered at night, as the cough or other symptoms seemed to require. After remaining stationary for several days, she finally began to improve slowly, although it was not until the seventeenth day that the difficulty of breathing and bloody sputa disappeared.

Congestion of the lungs, as a complication of scarlatina, is a common occurrence, and may be either active or passive. The former occurs very soon after the disappearance of the eruption, and before the nervous system becomes seriously implicated. It is accompanied with general vascular excitement, and consists of an expansion of the vessels of the lungs, through which a larger quantity of blood circulates than in a normal condition, without the existence of a decided tendency either to effusion or the development of active inflammation. Active congestion, in which there is increased vital action, may diminish in intensity until it becomes passive, in which there is a deficiency of vital power and a corresponding diminution in the velocity of the blood in the distended and weakened vessels. This condition may exist in any degree from a diminished velocity of the blood with distension to that in which the circulating fluid is reduced to the lowest point compatible with the continuance of vitality. In such cases, besides the constitutional symptoms, difficulty of breathing is the most prominent, there being neither cough nor expectoration. In the active form, no difficulty is experienced in affording relief by counter-irritants and diuretics, but in passive congestion stimulants and tonics should be combined with the remedies enumerated. Diuretics should not be abandoned in any case, no difference what may be the complication, until the health is completely restored.

Pleuritis is not so common a complication as bronchitis, although it occurs more frequently as a sequelæ, particularly in San Francisco, where sufficient care is not taken to protect children when convalescent from the vicissitudes experienced, particularly during the summer months. Several cases were met with even during the winter, in which pleuritis was developed soon after the disappearance of the eruption, in children who were exposed in bad weather without being sufficiently protected.

J. W., aged five years, a strong and healthy boy, was attacked with scarlatina, November 10th, 1859, and nothing unusual occurred until the seventh day, when symptoms appeared which accounted for the continuance of the fever after the eruption began to disappear. He then complained of pain in the left side, breathed with considerable difficulty, and had a frequent and full pulse. No evidence existed that the pulmonary tissue was implicated. On the following morning there was dullness on percussion, the respiratory murmur over the inferior and lateral portions of the left side had disappeared, and was replaced by ægophony, which indicated the presence of a fluid in the pleural cavity. Vin colchici sem., tinct. digitalis, pot. nitræ, and tinct. aconite rad. were prescribed, in combination with counter-irritants, and in a few days the difficulty of breathing, ægophony and dullness on percussion disappeared, and the patient recovered rapidly; diuretics being continued for two weeks to prevent dropsy, of which two younger children in the same house were affected in consequence of the derangement of the renal secretion which resulted from the want of proper attention during the eruptive stage of the disease. The best counter-irritants in ordinary cases that I have applied to young children when either pulmonary or gastro-intestinal irritation exists, and are not of too violent a character, is warm vinegar. Com-

presses wet with this fluid should be applied to the part affected, and covered with oiled silk and secured by a bandage. This application produces as much irritation as can be established without vesication, and is the only one that I have been able to keep constantly applied for several days in succession without establishing painful irritation, although it produces as much as should be excited in young subjects to avoid the constitutional disturbance that might result from the local treatment, which, in young children, frequently destroys the efficacy of this class of remedies.

## Editor's Table.

AMERICAN MEDICAL TIMES.—No. 1, Vol. I of this excellent weekly is before us. It is a continuation of the *New York Journal of Medicine*, which has been before the profession for the last 17 years. The weekly is edited as the former monthly, by Stephen Smith, M. D., associated with Elisha Harris, M. D., and George F. Shardy, M. D. The following departments indicate the scope of the weekly *Am. Med. Times*:—Original Lectures—Original Communications—Reports of Hospitals—Editorial Articles—Reviews—Reports of Societies—Medical News. Terms, \$3 per annum.

THE AMERICAN MEDICAL ASSOCIATION commenced its 13th session at New Haven, Conn., June 5th, at 11 A. M. The next day the Committee on Education made their report, to which were appended certain excellent resolutions, the 2d of which reads thus:

*Resolved*, That it be hereafter regarded as an indispensable pre-requisite to enrolment as a student of medicine in the office of any regular physician, that the party shall be at least seventeen years of age, of good moral character and habits, and shall have received a good English, classical and mathematical education, and be able to read and translate the Latin language, and have an elementary knowledge of Greek, so far, at least, as to be able to trace the derivations from it to the English language.—*Med. and Surg. Rep.* for June 16th.

We are sorry to say this resolution was not adopted. There were eight resolutions adopted concerning medical teaching, but in all candor, and without any wish to fault-find, we cannot see that they amount to anything definite. The only resolution that approximates coercion (coercion is a faculty the American Medical Association had, and should have a right to employ) is as follows:

*Resolved*, That this Association will not recognize as a regular organization, any college which does not require evidence of suitable preliminary education from all applicants for collegiate medical instruction.—*Id.*

On the whole but little has been done at this thirteenth meeting of the Association to prevent the profession from being flooded with under-bred uneducated men, who hurry into the profession with purely pecuniary motives, well knowing the diploma places them on an equal footing with thoroughly educated physicians, and that a close mouth, a knowing shrug, a sinister or suggestive smile, and finally, the coffin and heaped-up earth will conceal from the *people* (at least until they have made money) their audacious pretensions and unmitigated ignorance. We will never cease accusing the medical colleges of crime, for turning upon the people this rabble of M. Ds, who disgrace science and forever humiliate and degrade the profession of medicine.

CONSUMPTION.—We hope all who think California unfavorable to consumptive patients will carefully read Dr. Blake's papers, the first of which appears in this number.

#### ABSTRACTS FROM THE "GAZETTE DES HOPITAUX."

LOCAL ANÆSTHESIA.—M. A. Claisse (*Gazette des Hopitaux*,) says that if a solution of equal parts by bulk of pulverized camphor and sulphuric ether, be rubbed upon a part, local anæsthesia will result. By rubbing it upon the gums about a tooth, the latter may be extracted without pain, etc.

Mr. Waller, of Birmingham, (*ib.*) ascertained that a mixture of chloroform and tincture of aconite would produce local anæsthesia, but said it was also liable to poison the patient by absorption of aconite, and also to produce local *gangrene*; but M. Gueneau de Mussy (of London,) has employed it with great advantage in neuralgias of all descriptions, especially in facial neuralgia. He uses a liquid consisting of 2 parts alcohol, 1 Cologne water, 1 chloroform, and 1 of tincture aconite. This mixture is rubbed on the gums by means of a piece of lint applied by the index finger.

If the neuralgia is symptomatic of organic disease, such as affection of teeth, chronic inflammation of the gums or of the alveolar, or superficial necrosis of the bone, he substitutes tincture of iodine for the alcohol in the mixture.

PLEURITIC adhesions contra indicate the use of chloroform, according to recent researches of M. Faure upon animals and upon a woman who died under its influence in a Paris hospital in November, 1859, at La Charité, under the service of M. Manec, (see *Gaz. des Hopitaux*, 26th Nov., '59, and 14th Jan., '60.)

HEPHISTORAPHIE.—[*Hephaistos*, fire, and *raphée*, a seam.] (Suture by fire.) M. Gaillard, of Poitiers, has for the last two years been systematizing this delectable refinement of hot-iron-surgery. He had a case in September, 1857, which he treated for a year, and cured. It was a case of complete prolapsus from a fall, in a girl of 18 years. On the 3d December, 1857, after the failure of ordinary means to retain the reduced uterus, M. G. cauterized with an iron at white-heat (without chloroform) the posterior wall of the vagina to the height of an inch and three-quarters, including fourchette.

16th. Eschars having fallen, sore is cauterized with arg. nit.

28th Jan., '58. Cauterization with hot iron in same place. "The application of the hot iron agitated and frightened the patient a great deal." (!!) [Strange it should have this effect, particularly as the girl's judgment was not impaired by a single inhalation of chloroform.]

15th March. Hot iron.

15th April. Nitrate of silver. Then a few months of repose and other means employed.

25th July, 24th of October, and for the last time, the 27th of November, cauterization with hot iron.

28th December. Acid nitrate of mercury.

23d January. Repeated. Injections of perchloride of iron every morning.

4th February. Entrance of vagina is narrow, solid and resistant; the vaginal walls seem thickened and consolidated under the influence of these injections. Hydrotherapeutic treatment and injections of perchloride of iron.

In summing up, it will be seen that the treatment was prolonged a whole year. For two months the ulceration of the uterus was treated, and the cure of the prolapsus attempted by pessaries and rest; for five more months cauterization was employed, but irregularly and insufficiently. Finally, after this long treatment, we find a thick cicatrix. The solid walls built up by repeated cauterizations, are much more resistant than the ordinary adhesions produced by *avivements* and sutures according to the old process. The cure of this case is complete and definitive.—[*Gazette Medicale*.]

AT THE SESSION OF THE ACADEMY, 4th January, 1860, (*Gaz des Hop.*) M. Hougier said, I have now in my service an individual of doubtful sex, concerning which M. Debout spoke at the time of the discussion on hermaphroditism. I thought the Society would see the case with interest.

We see on the left side a kind of scrotum, in which can be felt an olive shaped body, which may, without any exercise of the imagination, be considered a testicle. This body ascends and descends by the contraction and relaxation of a dartos; it is surmounted by a cord somewhat analogous to the deferent canal. Notwithstanding all this, the prolongation, which might be mistaken for a penis, appears to be only an excessively developed clitoris. The vagina is tolerably well marked, as, by rectal touch, something is recognized which gives the idea of a uterus. Menstruation takes place regularly, and the blood escapes by a narrow orifice which permits the introduction of only an ordinary sound, and through which the urine also passes.

TRANSLANTATION OF BONES TAKEN FROM ANIMALS THAT HAVE BEEN DEAD A CERTAIN TIME.—At the Session of 16th January, M. Ollier addressed, under this title, the following additional note :

Strips of periosteum and entire bones taken from animals that have been dead some minutes, may be successfully grafted upon animals of the same species.

The vitality of these tissues is not extinguished with the cessation of circulation and respiration ; transplanted into a medium analagous to the one they previously occupied, they continue to live, and grow to a certain proportion, according to the laws of their normal development.

Separated from the living animal and exposed to the air, they may also preserve their faculty of being successfully engrafted, for some limited time, provided they are kept in a medium sufficiently moist. This persistence of vitality in *lambeaux* entirely separated from the body, though not yet demonstrated in reference to other tissues deeply situated in an analagous manner, is not confined solely to the periosteum and bones. Portions of the nose and of fingers have been re-applied with success in man, although the re-application was made in some cases not till the lapse of some minutes, in particular cases, many hours after the accident. Notwithstanding all proper reserve with which such cases should be received, science has recorded a certain number of them, the truth of which we can no longer deny.

*Lambeaux* of periosteum taken from rabbits that have died by hemorrhage, or by section of the bulbe, have been engrafted ten, thirty, sixty, and ninety minutes after the heart had ceased beating, and have furnished bony deposits.

Entire bones, (humerus, tibia, radius, etc.,) transplanted ten, thirty, sixty minutes after death, became perfectly engrafted.

In these various experiments, the engrafting was not illusory, since the transplanted bones presented at the end of five months, the following appearance : they were perfectly adherent to the medium in the midst of which they had been placed ; they were covered with a sub-periosteal osseous *couch* of new formation ; they were permeable to injections forced into the arteries.

A humerus of a young rabbit that had been dead one hour, was transplanted under the skin of the upper part of the thigh of another rabbit, and left five months in this situation. We then killed the animal, and a vermilion injection forced along the iliac artery penetrated into the transplanted bone. The track of a saw drawn parallel to the bone, divided three capillaries which had penetrated into the medullary canal. About this bone the sub-periosteal *couch* of new formation was distinctly seen, especially in certain points.

The three circumstances related above leave not a doubt of the vitality of these bones. Not only did they resist absorption, but they absolutely grew. The growth or increment took place in the thickness through the mediation of the periosteum, as in the normal bone, in the same manner demonstrated by M. Flourens in his excellent experiments on the development of bones.



The increment in length of the bones we transplanted, under the conditions above enumerated, has generally appeared to us null or scarcely appreciable.

When the engrafting does not succeed, the bone becomes the centre of a purulent collection, and is sooner or later eliminated. Under other circumstances it becomes encysted, or perhaps, immediately commences to be absorbed.

In cases where an abscess forms, the graft may still partially succeed. The bony tissue becomes necrosed, and loses all participation in the life surrounding it; but the periosteum adheres in some points to the surrounding parts, separates from the bone as it separates from a sequestrum in cases of necrosis observed in man, and afterwards becomes the source of new bony products about the old bone, which will be thrown off in the course of time. Bones deprived of their periosteum have not by us been found susceptible of being engrafted; they act like foreign bodies, and cause suppuration, or are gradually absorbed, (*resorbes*.)

[These elegant and to a certain extent satisfactory experiments of M. Ollier, in conjunction with the recent definitive investigations of M. Flourens on the collateral department of the same subject, settle these facts: 1. That under certain circumstances bones are reproduced. 2. That bones may be transplanted from one part of the body to another part with success. 3. That they may even successfully be engrafted from one animal into another of the same species. 4. And it is not certain that the same may not be done in allied though not identical species.]

**RUPTURE OF THE WOMB AFTER CÆSARIAN OPERATION.**—(Society of Surgery, (Paris,) Jan., 1860.—On the 12th August, 1858, MM. Bourgeois and Delpoulle performed the Cæsarian operation, at term, with success to both mother and child. The superior strait was less than two and a half inches, and the child could not be delivered by the natural passages. One year after the operation, Madam S. was found, at four and half months, of a second pregnancy, when suddenly, under the influence of an effort, violent pains of the abdomen occurred, attended with severe vomiting. (There was no hemorrhage from the vulva.) Madame S. did not perceive any alteration in the shape of the abdomen till next morning; then a considerable tumor appeared at the lower and middle portion of the belly.

Same symptoms continued eight days, when M. Bourgeois was called. He found hernia of the white line, could feel the head of a fetus separated from his hand only by the thinned teguments of the straight muscles. "I could grasp the feet (of the fetus) one after the other, and trace the legs to the knees; it was clear that the fetus was not separated from the skin by the globular and resisting body of the uterus," says M. B. Six weeks later, there were signs of labor, and the woman had uterine hemorrhage of black, fetid, clotted blood. Pains next day; no appearance of labor. Abdomen sensitive, pulse 120, skin hot, face pinched, sleeplessness, agitation, short respiration, constant vomiting after every swallow of liquid, constipation,

**anxious appearance. Peritonitis; subsided under belladonna and mercury. Fœtid discharge from vulva continued.**

On the 27th December, at the end of eighth month of pregnancy, or three and a half since supposed rupture of womb, there is yet a very slight discharge of sero-sanguinolent, very fœtid liquid.

Madame S. is better; she has a good appetite, and has somewhat recovered her strength; since yesterday she has been up and taken a few steps in her room. The Society's Commission, consisting of MM. Douyau, Cazeaux, Depouille and Laboire, after carefully examining the statement of M. Bourgeois, (the attending surgeon and physician,) of which this is a very brief abstract, and after being unable to find any analogous case in any work of medicine or surgery, say: "We cannot be guided by the comparison of analogous cases, for this has no recorded antecedent. But is this a reason why we should not admit the diagnosis of M. Bourgeois? Undoubtedly not; but we shall be less explicit than our confrere. According to his statement, we cannot deny the rupture of the uterus, or, to speak more clearly, the laceration of this organ in the line, probably previously incised. By this opening or rent, a portion of the fetus produced a hernia, and engaged in the abdominal cavity, while the other part remained in the womb. The fetus, strangulated in this manner, ceased to live, and the liquid parts of the ovum flowed out from the womb at the same time that the hemorrhage occurred from the successively destroyed placental adhesions.

"The fœtidity of the discharge, and its serous quality, appears to entirely justify this appreciation; at the same time, the issue of this discharge by the natural ways, demonstrates that the ovum, as it partially became emptied, (verified by the diminution of the abdominal tumor,) must have remained in relation with the interior of the uterus.

"Thus, in summing up, if the rupture of the uterus occurred, according to the opinion of M. Bourgeois, supported by the symptoms which he describes, the ovum was not completely engaged in the abdomen, but enough of it remained in the uterine cavity to be able to empty itself by the natural ways. The marked diminution of its volume, the increase of its consistence, the simultaneous cessation of the inflammatory symptoms, and the suspension of pain, appear to demonstrate that the ovum thus arrested in its development, reduced by degrees to its solid elements, tends to become encysted. This probable termination, so long as nothing yet permits us to doubt that it will occur, should postpone all thoughts of intervention.

"Your commission, then, may reply to M. Bourgeois:

"1. That for the present he should wait.

"2. That if at a future period accidents supervene, it will be proper before undertaking anything, to ascertain by exploration of the uterus with the hystrometer, if it is really empty. And then only if it shall be determined that the ovum is really in the abdominal cavity, recourse should be had to the extraction of the fetus through the abdominal wall.

"3. That if the symptoms were not *too* pressing, the cyst should be penetrated by caustics in preference to any other mode."

[This is careful, conscientious and conservative counsel, and does honor to medical science. But *here* in California, *nous avons change tout cela*. Almost any one of our surgeons, unadvised, would have cut out the fœtus on the instant of the rupture, with a coolness and self-reliance, and, I may add, dexterity, that would astonish the conservative members of the Society of Surgery of Paris.]

**PUPURA HÆMORRHAGICA.**—A severe case is reported in the *Gazette des Hôpitaux*, 9th February, cured by absolute rest in bed; cold chicken broth and a little generous wine for food. The medical treatment was 25 grains of perchloride of iron to a pint of water; the whole to be drunk daily.

A lavement of 20 grains perchloride of iron to half a pint of water.

Under this treatment, the discharge of blood from the rectum ceased entirely in three days; but the patient still ejected from the mouth a small quantity of blood, but this also ceased a *few* days later. Eleven days after the beginning of the treatment, the purple spots assumed a yellowish hue, and fourteen days later had entirely disappeared.

The convalescence was not of long duration; patient since (for several months) in good health. He was 68 years old.

**DISINFECTANT.**—M. Jobert de Lamballe said, when the report of MM. Velpeau, *et als.*, was put upon its adoption, that all the authority of M. Velpeau could not make a (chemical) disinfectant of coal tar and plaster; that this preparation merely masked the odor without annihilating it.

Velpeau replied that he had nothing to do with the chemistry of the thing. His business had been to determine whether it did actually cause the odor to disappear, not *how* it did it; and this he and his associates in the commission had verified beyond a doubt. The surgeon or anatomist might handle the most putrid and decomposing animal substances, and afterwards, by rubbing his hands in the gray powder of coal tar and plaster, remove from them every trace of odor. This composition is equally useful for domestic purposes.

**WOUND OF THE LARYNX.**—A case of complete transverse section of the larynx occurred in a French sailor on board the war corvette *Prudente*, in the harbor of Guayaquil, (Ecquador.) He entirely recovered under the care of Dr. Berchon, in just one month from the infliction of the wound.

**SPONTANEOUS GENERATION.**—The absurd idea of spontaneous generation is not yet abandoned by all the members of the Academy of Sciences. M. Pasteur is the last experimenter on this chimera. He thinks he has verified matter simply in a condition of life to which if oxygen be added life begins.

**AMPUTATION OF THE TONSILS IN DIPHTHERIA.**—M. Bouchut, the persistent advocate of this local treatment of diphtheria, has yet found no cause to change his mind, despite the obloquy and sneers of the profession at the

physician who presumes to treat a constitutional disease by local surgical means. Two new cases are reported at length, both successful, in the *Gaz. des Hop.*, 25th February.

**RICORD ON IODINE.**—(Discussion at the Imperial Academy of Medicine, March 6th, 1860.)—**M. RICORD**—I have listened with the interest, attention and silence which it merits, to the report read to us by M. Trousseau upon two memoirs treating upon the same subject, the action of the iodic medication upon the economy. This action has been so differently decided upon by the authors of the memoirs, that one could almost doubt if it is the influence of one and the same substances that they have studied. In M. Boinet's (one of the authors) estimation, iodine is not only inoffensive, but it is one of the most valuable of therapeutic agents. Its action is so beneficent, that the author of the memoir on iodized food, (Boinet) has multiplied the modes of administration of the element to such a degree, that we may say of him, paraphrasing a well known verse,

“Aimez vous l’iodine? il en a mis partout.”

Do you love iodine? he has scattered it everywhere.

M. Boinet has at least given iodine very extensively, and has never observed any serious effects from its use.

M. Rillet, (author of the other memoir—M. Rillet is of Geneva, and M. Boinet of Paris,) on the contrary, in patients who had absorbed iodine in doses so minute as to be scarcely appreciable by calculation, M. Rillet has observed frightful consequences in his patients.

Between these two contradictory assertions, M. Trousseau abstains from judging, or at least before giving his opinion he wished to appeal to those who had used this substance. As it is now nearly thirty years that I have employed it in practice, my love for this remedy induced me to occupy the floor at the earliest opportunity.

When I began to employ iodide of potassium in the treatment of the persisting consequences or accompaniments of syphilis, I did so cautiously and even timidly. The first doses I administered were, I will not say homœopathic, but at most they were very minute, such in quantity as the physicians of Geneva employ. These Genevan doses, I affirm, had no effect in Paris. I increased the dose gradually till it produced a curative effect without doing injury. I stopped at a dose of from fifteen to thirty, or forty-five grains a day, and have never gone beyond ninety grains a day. At the same time I am aware that these doses have been considerably exceeded by one of my colleagues at the hospital *du Midi*, and that M. Puche has gone as high as fifty grammes (750 grains) a day, without observing any bad effects.

With elevated doses, though never surpassing six grammes, (90 grains,) I have obtained the best therapeutical results. I have not studied the effects of this remedy only upon the disease for the cure of which I sought, but I have also studied its effects upon the patient; in a word, I desired to inform myself concerning both its physiological and pathological action.

One of the most incontestable physiological effects of iodide of potassium is its action upon the appetite, which it increases. It assists the digestive functions, and, consequently, the function of nutrition; and increases the globular element of the blood. The researches which I have caused to be made by M. Graise upon the blood of my syphilitic patients, places this latter action of the remedy beyond all doubt. That iodide of potassium fattens syphilitic cases, is evident to our eyes; nevertheless, to be more certain on this point, I have caused my patients to be weighed before and after treatment.

I recollect a case which M. Cruvelthier saw with me, and which proves that iodide of potassium may be considered as an agent which reconstitutes the globular element of the blood. In this case, a well marked example of chloro-anæmia was cured by the use of iodide of potassium.

But, I repeat, it is especially in tertiary constitutional syphilis that iodide of potassium is of incontrovertible efficacy, and we do not have to suffer the evils from it observed at Geneva as an offset for its good effects in this disease.

The pathogenic effects of the iodide of potassium are entirely derived, by a peculiar kind of contradiction, from the aplastic action it exercises in certain special conditions, and from the augmentation it induces in the serous element of the blood. Thus it induces sometimes a pyalism analogous to that of pregnant women, and which proceeds not only from hypersecretion of the salivary glands, but also from the gastric mucous membrane. Coryza, œdematous ophthalmia, bronchorrhœa, and even œdema of the glottis, serous congestions of the brain and sub-retinal œdema, analogous to the congestions and œdema which M. Louduzuy observed in Bright's disease, are, with palpitation and general symptoms of hydremia, the accidents which may be attributed, in certain cases, to the use of preparations of iodine. But, fortunately, these accidents are never present all at one time; they are manifested separately. If they occurred together, then indeed the spectre of iodism would rise before our eyes; that spectre which M. Rillet has painted in such frightful relief.

I must not omit, among the pathogenic effects attributed to iodide of potassium, atrophy of the breasts and testicles, for it has been accused of producing this result. For my part, I have never observed atrophy of these organs, by any means clearly traceable to iodine treatment, in a single instance. These, then, are at least, very rare accidents.

When a woman grows poor while she is under the iodine treatment, one should be careful how he takes atrophy of the cellulo-fatty tissue of the breasts for atrophy of the gland itself. The gland does not change.

In regard to the testicles, there is also a source of error. If we allow a syphilitic sarcocele to go on without treatment, the testicle becomes atrophied; iodide of potassium arriving too late cannot restore what is already lost; but when it arrives in time, it restores the functions of the organ which it is accused of atrophying.

I should say, the accidents I have enumerated are not often serious, and are always of short duration.. The duration of the pathogenic effects of iodide of potassium is necessarily in relation with the rapidity of elimination of this remedy, of which the economy relieves itself very speedily. As for myself, I have never seen the long continued effects mentioned by M. Rillet. I prefer to say long continued, instead of poisonous, because the latter word frightens, and may estrange some from a treatment which should be surrounded with respect and regard.

According to my observations, if iodide of potassium causes accidents, it is in consequence of idiosyncrasies which, fortunately, are very rare, and are found, perhaps, once in a thousand cases. I am of opinion that patients who have a certain scorbutic predisposition, or a diffidence of the blood, should not be submitted to the iodine regimen except with great precaution.

As to the idiosyncrasy of the Genevans, I confess I do not at all comprehend it. Does goitre, so common in Geneva, contra-indicate the employment of iodide of potassium? I know nothing about this; I should remark, though, that patients with goitre come from Geneva to Paris, and are treated, without bad effects, with iodine as we administer it here.

. . . . .

I doubt the existence of iodism, and if it does exist, I do not comprehend it; hope that the Genevans who need the iodine treatment will come and be treated in Paris, where certainly, they will suffer none of the accidents with which they are menaced in their own country.

[We would like to be informed if any person in the United States has ever been known to take 50 grammes or 750 grains a day, (which dose M. Puche has given with impunity,) and whether it produced any unpleasant head symptoms, etc.—ED ]

M. HEURTLOUP, *ib.*, (23d Jan., '60,) submitted to the Academy of Sciences a work on physiological phenomena, which he terms *myolethe*, or muscular forgetfulness, (*oubli du muscle*.) The muscular system is under the influence of the cerebro-spinal system, and a muscle may contract under the influence of the will or without the exercise of volition, or partly by volition and partly independently of the latter. On the harmony of action of the two systems, (cerebral and spinal,) depends the certainty and regularity of the phenomena of life. But if from any cause this natural relation is perturbed, and the functions of either system is interrupted, suspended or excited, new and unexplain phenomena occur. We have all observed this phenomenon of muscular forgetfulness, especially in the act of respiration. How often patients have been heard to say, "I forgot to breathe;" but respiration goes on generally without any apparent aid from volition. But, unconsciously, in health, the brain constantly solicits the muscles to act; and if this solicitation is for an instant interrupted, muscular contraction is for an instant perturbed, being only under the influence of the spinal system.

The interruption may be momentary or persistent.

When the arrest of action is of short duration, it may produce grave disorders, according to the importance of the function it disturbs. When it is durable, it produces chronic diseases or impotency of organs, the more serious because all organs are in relation with the brain.

The study of *myoelethe* leads to useful results, considered with reference to natural physiology, hygiene and therapeutics; and this phenomenon appears to me to be the key to most of those facts which have hitherto appeared to depart from the ordinary laws which govern the economy. (Referred.)

**GALVANIC ANÆSTHESIA** [better say galvanic diversion of sensibility,] is an American discovery now much employed in Paris in extracting teeth, and in many of the tegumentary surgical operations.

**CRURAL HERNIA.**—In 6,044 cadavers examined by M. Legender, (recipient of \$500 prize from the Academy of Sciences, *Gaz. des Hop.*, page 56, 1860,) there were only 37 cases of crural hernia; of these, 30 were in women and only 7 in men.

M. HOUGIER's case of hermaphrodite, in which neither he nor his patient could determine the sex, (given on page 272,) has been determined by M. H. He laid open the clitoris or penis from its extremity to near the anus, when there appeared a sort of egg-shaped cavity, at the upper portion of which was the female urethra, and below, the vagina, guarded by a crescent-shaped hymen. The vagina permitted the introduction of a cylinder half an inch in diameter. The uterus was demonstrated by the rectal touch. Hence, it was a mistake to say the urethra opened into the vagina, or that the menstrual fluid was discharged by the urethra; but rather, that both urethra and vagina opened into a common reservoir, prolonged into a duct along the surface of the elongated clitoris.

M. Hougier formed a sort of vulva and perinæum which succeeded, and thus deprived the empire of a conscript, and added a woman to the population of Paris.

M. Richard was not right in declaring to the Academy that all the cases of pretended hermaphroditism are of the male sex.

**RESULT OF THE CASE OF RUPTURE OF THE UTERUS** mentioned before, (page 274.)—M. Bourgeois sent another note to the Academy of Surgery, at its session of the 14th March, in which he says that on the 28th January, 1859, that is, at the time corresponding to full term of pregnancy, there appeared symptoms of inflammation in the tumor. On the 2d February, the tumor ulcerated, and the abdominal wall of the cyst opened. There escaped from this aperture a sanious fetid liquid, and a discharge of the same nature came simultaneously from the vagina. So the diagnosis of the commission, that the fetus had not entirely escaped, was confirmed.

On the 20th, M. B. extracted fetus through the fistulous ulceration after one foot had presented. During the efforts at extraction, he tore the margin

of the ulceration a little, which facilitated the removal. The fœtus was almost twelve inches long. M. B. next tried to remove the placenta through the same opening, but succeeded in pulling away only a portion of it. The woman, after a series of serious accidents, was nearly convalescent on the 3d of March, for she got up and ate. The ulceration was in good condition, and was gradually cicatrizing. March 5th, new accidents; fever, vomiting, hiccough, tetanic contractions, etc. Death took place on the 7th. Autopsy not permitted.

**PROTO-IODIDE OF MERCURY IN THE TREATMENT OF SYPHILIS.**—Professor Sigismund (of Vienna,) believes less and less in this preparation. He has satisfied himself by numerous experiments, of the following results:

1. The property attributed to prot. iod. mer., of not producing salivation when combined with opium, is without foundation.

2. It produces diarrhœa, even when associated with opium.

3. It can be employed only in certain forms of syphilis, (papular and pustular,) and even in these its effects are slower than those of other mercurial preparations.

4. In the *tenacious* (tenaces) forms of syphilis, this remedy is of little or no value; in anæmia it is positively injurious.

5. Proto-iodide of mercury does not in any manner merit the preference some have bestowed upon it in the treatment of the diseases of children; and if these little patients are anæmic or disposed to diarrhœa, its use is absolutely dangerous.

6. Combined with iodide of potassium, it may be of service in some obstinate forms of syphilis, provided the patients present no predisposition to catarrh of the lungs, stomach or intestines.—*Vien. Woch. Med. Times and Gaz. Gaz. des Hop.*

**SCANDAL.**—A passage-at-arms occurred at the Imp. Acad. de Med. session, 3d April, between M. Trousseau and Malgaigne. In the course of some remarks on iodism, M. Trousseau said:—There are several characteristics of man; the first, that in the sacred books, which characterize man by the exclusive privilege of *mingere ad parietes*.

The second, that of Ovid:

O homini sublime dedit, cœlumque tueri  
Jussit, et erectos ad sidera tollere vultus.\*

"O man, to thee the gods have given,  
To cast thy gaze among the stars of heaven,  
To walk with stately step and flashing eyes,  
Whose glances dart around the vaulted skies."

Or this:

"Oh man, to thee it is sublimely given—  
Beholding all things 'neath the vaulted heaven—  
Firm to command, and proud in every grace,  
E'en to the stars to lift thy beauteous face."



The next three were represented by Madame di la Sabliere, Brillat-Savarin and the distinguished Ricord. The sixth and last by M. Chatin, who is the embodiment of iodine. Iodine is his corner-stone, etc.—a speech of four columns.

M. MALGAIGNE—I regret M. Trousseau had not abstained from pleasantries, which seem to me entirely out of place. Why introduce the Bible in this discussion? It is not that which gives the detestable characteristic which you have just heard.

M. TROUSSEAU—A thousand pardons; it is found in the Book of Kings, and it occupies six short verses.

M. MALGAIGNE—I don't believe it.

TROUSSEAU—I will show it to you.

MALGAIGNE—And you will do me a favor.

The perpetual Secretary interrupted further sparring between the distinguished savans.

M. CHASSAIGNAC recommended amputation of the leg in case of compound dislocation of the astragalus. (*Gaz. des Hop.*, 19th May.) M. Broca believed there was danger in allowing this opinion, uttered by Chassaignac, to pass unnoticed.

The total number of luxations of the astragalus studied by M. Broca, was 160.

Total extirpation of the astragalus was performed in 86 of these cases, and of these 17 died.

Immediate extirpation was performed in 59, with 17 deaths.

Consecutive extirpation performed 27 times, every case successful.

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WOUNDED AT MONTEBELLO.—In the hospital at Alessandria (*Bull. delle Scienze Mediche*) there were treated 552 officers and privates, wounded at the battle of Montebello, of which number 429 recovered and 103 died:

Of those wounded in the head,	26 recovered	22 died.
“ “ in the shoulder,	36 “	32 “
“ “ in the arm,	35 “	31 “
“ “ in the hand,	44 “	42 “
“ “ in the chest,	43 “	28 “
“ “ in the abdomen,	9 “	8 “
“ “ in the col. vertbr.,	35 “	31 “
“ “ in the hip,	43 “	38 “
“ “ in the thigh,	98 “	53 “
“ “ in the knee,	20 “	9 “
“ “ in the leg,	82 “	65 “
“ “ in the foot,	29 “	27 “

Of the statistics of amputations of the thigh, already mentioned, there are still to be added that, of 22 Frenchmen, 11 died; of 39 Germans, 22 died, and of 4 Italians, 3 died.

**VACCINATION.**—In the *Bulletino delle Scienze Mediche* appears an ordinance concerning vaccination, of which the following is the commencement :

*Vittorio Emanuele II.* King of Sardinia, of Cyprus, and of Jerusalem, Duke of Savoy and Genoa, etc., etc., Prince of Piedmont, etc., etc., we have ordained, and do ordain as follows :—

**SCANZONI.**—Frank Marquard, A. B., a medical student of this city, has begun the translation of Prof. Scanzoni's work on obstetrics, and will complete it at an early day. Select chapters will appear in this journal every month hereafter, from the MS. of the translator. He has, we learn, taken out a copyright of his translation.

**HEALTH OF THE METROPOLIS.**—The health of this city, for the last few months, has been excellent. We have no epidemic, and have not had since the decadence of scarlatina. There were one or two mild cases of small-pox, in June: none this month. This warns us that vaccination should not be neglected. We see a few imported phthisical cases; very few, if any, have originated in this country. Of affections of the heart we cannot speak so confidently; in fact, we believe many cases originate in this State; we *know* of some. We believe in metastasis. Rheumatism first, heart disease afterwards. There are many cases of rheumatism, and not a few of neuralgia. There have been a few deaths by violence in the last few weeks.

In June the mortality was 126; for July, up to the 21st inst., inclusive, the deaths were 97.

**ERRATA.**—Dr. Vollum calls our notice to the following in his paper of last month :—"There should be a capital letter to the word 'considering,' eighth line of the third paragraph, page 236, and a comma after the word 'functions,' in ninth line of the same paragraph. As it stands the sense is confused."

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### Received.

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**THE CLAIMS AND POSITION OF PHYSIOLOGY.**—An anniversary oration delivered before the South Carolina Medical Association February 1st, 1860, by S. Dickson Bruns, A. M., M. D., Lecturer on Physiology in the Charleston Preparatory Medical School, &c., &c.

**ANNOUNCEMENT OF RUSH MEDICAL COLLEGE.**—The Eighteenth Annual Course of Lectures, being the session of 1860-61, will commence on Monday, the 5th of November, 1860, and continue sixteen weeks.

**ANNUAL CATALOGUE and Announcement of Saint Louis Medical College, session 1859-60.**

From the New York Medical Press.

### How Quackery Pays.

EXTRACT from a Lecture delivered before the Young Men's Association of New York, by Mitchell Sanford. \* \* \* "But there is another side to this picture, and it is dark, forbidding and unrelieved—cold and heartless avarice, bargaining for blood; quackery, with its impudent pretension, dealing in death, and making merchandise of the grave; sending its victims into eternity for gold. Quackery seeks for gold, and it gets it. But it gets it by terrible fraud and impudent deceit. The charlatan says he can cure when he knows he cannot, and he kills. The pirate says he will kill; he knows he can, and he does it. Both strive for gold, gold, gold, and both reap its penalty in death, death, death.

"Honest practice hardly pays. It builds no palaces, nor decks them with oriental magnificence. But quackery does pay. It does get gold, and it does build palaces. There is a building on Broadway, New York, large and magnificent, known as Moffat's building, which pays a rental of \$25,000; on the ground floor are stores, and in the upper stories offices, and it is all occupied. Many years ago, a poor doctor, in the quiet of his office, compounded some pills and called them *Life Pills*, and made some bitters which he named *Phoenix Bitters*—taking names: *Life pills*, to infuse all the renewed vigor and strength of active existence into a wasted frame, and *Phoenix bitters*, possessing the magic powers of the fabled bird, and restoring pristine strength and activity from the dead ashes of decay. So, with his *Life pills* in one hand and his *Phoenix bitters* in the other, not half so good as the home-brewed beer the speaker's mother used to make of hops, parched corn and dried pumpkins, he went out into the suffering and dreadfully diseased world; and he built that palace, and bought another next door, and still another across the street, and a whole villa at Bloomingdale;—and his life is not yet exhausted, nor his creative power all dispensed, for he is still at it—in the words of the immortal Webster, 'he still lives.' And yet, the doctor who has worn himself out in his grapplings with disease, who has buffeted the storm in the cold midnight, and faced death in dungeon damp; who has sat hour after hour by the bedside of the dying, and smoothed the pillow for the weary head—he has worked without his reward and died poor.

"Pass on further up Broadway—for 'broad is the way that leads to death'—and you find another magnificent building, called the 'Brandreth House.' On its front, all the way from the corner stone to the topmost one, you will find written in flaming characters: '*Humbug*'—humbug at the base and quackery at the summit. And this great hotel was built entirely with pills; that cure all diseases, of all climes and all constitutions; one box will cure the liver, and another the lights; three will heal the lungs, four reinvigorate the whole system, and five will relieve the sufferer from all pains and penalties of this weary and sin-stricken world, and transport him spiritually and bodily to the regions of the blessed! But if the pills will not do this, we know what they have done; they have built a hotel and made a Senator, and from his senatorial bench the legislator has told us of the wondrous virtues of Brandreth's pills."

MY own success depended upon my zeal; but for this I take no credit, as it was given to me from above.—*Sir Astley Cooper.*

[Continued from May number.]

From the New Orleans Medical and Surgical Journal.

**Medical Chronology.**

1225. Foundation of the University of Naples; Richard of Wendmere.
1227. Nicholas Myrepsicus.
1235. Birth of Raymond Lully.
1238. Frederick II gives laws to the schools of Salernum and of Naples.
1243. School of medicine at Damascus.
1248. Death of Ebn Beithier; Gilbert of England.
1250. The scurvy ravages the army of Louis IX; Birth of Peter of Abano.
1252. The Emperor Conrad endeavors to improve the school of Salernum; Brunus of Calabria; John de St. Amand.
1263. Demetrius Pepagomenes.
1264. Death of Vincent, Abbot of Beauvais.
1271. College of Surgery at Paris.
1277. Death of Peter of Spain.
1281. William of Salita.
1282. Death of Albert of Ballstaedt.
1283. John, son of Zachary, surnamed Actuarius.
1285. Bernard Gordon; Arnold de Villanova.
1287. First appearance in Europe of the Plica polonica.
1295. Lanfranc goes to Paris; death of Roger Bacon and of Thaddeus c. Florence; Simon of Cordo.
1298. Theodoric, Bishop of Cervia.
1302. William of Varignana.
1304. William Baufet, Bishop of Paris, and physician to the King of France.
1305. Bernard Gordon writes his Manual.
1306. Peter of Aichspalt, Elector of Mayence.
1308. Torrigians.
1311. Great privileges ceded by Philip le Bel to the college of St. Come, at Paris.
1312. Vitalis of Four, Cardinal; death of Arnold of Villa Nova.
1314. John of Gaddesden; Mohammed ebn Achmad Almarakschi.
1315. Mondini; first public amphitheatre for dissections; death of Raymond Lully.
1316. John Sanguinaceus regarded as a sorcerer.
1317. Matthew Sylvaticus writes his Medical Pandecta.
1320. Death of Peter of Abano.
1325. Death of Mondini; death of Dinus of Garbo, and St. Roch.
1328. Francis of Piedmont.
1340. Gentilis de Foligno.
1342. Cecco of Asculo; death of Nicholas Bertruccio.
1343. John de Dondia.
1347. Regulation of Queen Jane respecting the houses of ill-fame at Avignon.
1349. Death of Gentilis de Foligno; James de Dondis.
1363. Guy of Chauliac.
1365. Confirmation of the regulations of the School of Salernum, by Queen Jane.
1369. Death of Thomas de Garbo.
1373. The necessary conditions are fixed, by which a cure should be deemed miraculous, and the physician canonized.
1374. Epidemic dance of St. Guy, on the borders of the Rhine; St. Catharine of Sienna.
1376. Permission granted to the School of Montpellier to open dead bodies.

(To be continued.)

DR. TODD.—We announced in our last the sudden ending of the labors of Robert Bentley Todd, M.D., of London, the eminent physiologist and physician. In our present issue we purpose to recall a few of the incidents in his life. He was the son of an eminent physician and Professor in the University of Dublin, who, like the subject of the present biography, was suddenly cut off in his career. He graduated at Trinity College, Dublin, and went to the great metropolis of England as a young man, entirely dependent on his own character and energy. He had the strongest inclination for anatomical studies, and purposed being what is called a pure surgeon, but finally he took the *ad eundem* degree at Oxford, and became a member of the College of Physicians. Soon after his arrival in London he planned his great work, the "Cyclopædia of Anatomy and Physiology," which after many years was completed under his editorship. Also, along with Mr. Bowman, he was author of the "Physiological Anatomy and Physiology of Man," a work with which all our readers are familiar, and which we regard as one of the most fascinating and elegantly written as well as learned works which is placed in the hands of the student. His "Lectures" on different subjects, and other works of minor importance, have all contributed to establish his well earned reputation. In 1837 he was appointed Prof. of Physiology and of General and Morbid Anatomy in King's College, and he took a leading part in the organizing of King's College Hospital, an institution which is mainly indebted to him for its rapid progress under great difficulties, and which he labored in with unceasing energy until about four months ago, when he resigned on account of bodily ill health. He also enjoyed a large practice, and was ever at work, attending the sick, advancing education, writing, editing and scheming. In 1847 he circulated a paper which led to the foundation of St. John's Training Institution for Nurses, an institution from which Miss Nightingale drew largely in forming her corps of nurses which she took to Scutari. Dr. Todd's last illness was sudden as we have said. He had received a professional summons to Wales, and returning he slept at Gloucester. Waking next morning, the 30th of January, he felt ill, but professional engagements compelled him to pay some visits in the morning, directly after reaching London. At two o'clock we find him in his consulting room, where he was seized with hemorrhage from the stomach, and it continued to such an extent that he died at 8 o'clock the same evening, in the 51st year of his age. He has left a widow and four children. We refer our readers to a notice of one of his works in the present number of our Journal.—*Nashville Journal of Medicine and Surgery.*

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### From the Code of Medical Ethics.

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CHAPTER II, SECTION 3.—It is derogatory to the Profession, to resort to public advertisements, or private cards, or handbills, inviting the attention of individuals affected with particular diseases—publicly offering advice and medicine to the poor, gratis; or promising radical cures; or to publish cases and operations in the daily prints, or to suffer such publications to be made; to invite laymen to be present at operations—to boast of cures and remedies—to adduce certificates of skill and success, or to perform any other similar acts. These are the ordinary practices of empirics, and are highly reprehensible in a regular physician.

From the New York Medical Press.

## Hysterical Anæsthesia.--Catalepsy in Religious Revivals.

ANÆSTHESIA OF THE SKIN IN HYSTERIA: by M. Aug. Voisin, of Paris. [An abstract of M. Voisin's interesting pamphlet, of 39 pages, on this subject, (*De L'Anesthésie Cutanée Hystérique*), was translated for the last September number of this journal, but was excluded, with the exception of a single paragraph, for want of space. The following analysis, from *The American Journal of Insanity* (for January, 1860,) being more complete, will be found below. M. Voisin's ingenious remarks are founded on fifteen anæsthetic cases, together with some cases of hyperæsthesia, paralysis, etc., which he had observed at the Charity and Lariboisière Hospitals during his *internat* (*internship*—anglicised by a neologism) in these institutions.]—*N. O. Med. and Surg. Journal*.

In a brief historic notice of the principal writers on hysteria, the learned author pays a well-merited tribute to the name of Sydenham. In the very thorough discussion which follows, he makes the following divisions:—1. The relations that may exist between the attacks of hysteria and cutaneous insensibility. 2. The tendency of this insensibility to localize itself in one-half the body. 3. The co-existence there of excessive sensibility with the entire want of it. 4. The pathology of the sense of touch, and the treatment proper for the class of paralytic symptoms here considered.

Among the many valuable remarks which this paper contains, we notice the following as specially worthy of attention:—

"In cases of hysteria, cutaneous insensibility, with scarcely an exception, pre-supposes that the attack was attended with loss of consciousness. In other words, loss of consciousness and the anæsthesia are related in cause and effect.

"My grandfather, Dr. Felix Voisin, in his '*Etude sur les Causes des Maladies Nerveuses*,' maintains that the immediate seat of hysteria is the brain. My own opinion is, that the anæsthesia of hysteria may be traced directly to disturbance in the cerebro-spinal column. So intimate, however, is the connection between this column and the brain, that the two ideas are not far apart.

"The existence in the same subject of insensibility and the liveliest sensibility, appears like a pathological contradiction. For an explanation of this we are indebted to the careful researches of M. Briquet. According to him, the insensibility belongs to the skin, the excessive sensibility to the muscles."

Amid some curious observations on the different qualities and conditions of the sense of touch, the author mentions a remarkable effect produced by the paralysis of this very part of the human frame. When this sense is wholly gone, that of sight becomes the whole reliance. Blindfold the patient thus affected, and he cannot even direct his hand to his mouth. An instance came under the eye of M. Briquet at La Charité, in which the patient, having her eyes blinded, was taken out of bed, placed on the floor, and then put back into bed, without the slightest consciousness that anything had been done to her. Another described her sensations when deprived of light, by saying that "she felt as if she had been plunged into utter emptiness."

The treatment of hysterical anæsthesia is involved in difficulty. Few efficacious remedies have as yet been found.

"For hysteria itself, preparations of iron and other tonics, belladonna, and the anti-spasmodics, are the means in common use, though often unsuccessful.

"For the paralytic affections, we use friction, kneading of the flesh, strychnine, brucine, and the water-cure. Quite recently, M. Duchenne, of Boulogne, has applied local electricity in the cure of this disease. We have ourselves seen, under the hand of M. Briquet, several cases suffering from recent anæsthesia, restored to feeling in the course of a few minutes, by the electric action. But cases of long standing resisted this treatment as they did every other."

The author relates fifteen cases of hysterical anæsthesia, giving with much minuteness of detail, the symptoms, course, and treatment of the disease in each case.

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CASE OF PUERPERAL CONVULSIONS SUCCESSFULLY TREATED BY SUBCUTANEOUS INJECTION OF MORPHIA.—Medication by subcutaneous injection of various remedies, especially the salts of the alkaloids, begins to play quite a prominent role. Although we look upon the subject with some doubts of its ultimate success, and fear that, as is usually the case with new modes of treatment, subcutaneous injection will be carried to the extreme, and for this very reason its true merits will not be put in the proper light; yet we cannot omit to record an observation coming from so high an authority as Prof. Scanzoni undoubtedly is. From one of the recent numbers of the *Bulletine de Therapie*, the *Medical Times and Gazette* quotes a case of puerperal convulsions recorded by Scanzoni, occurring in a robust primipara, twenty-one years of age. When labor commenced, convulsions, with loss of consciousness, supervened. The entire body, and especially the extremities, were oedematous, the urine contained albumen, and presented to the microscope numerous fibrinous cylinders. Venesection, a bath, and cold irrigations to the head, were prescribed; later, a solution of meconate of morphia was subcutaneously injected three times, and from this time until the termination of labor, the convulsions (which, as a rule, it will be remembered, not only become more violent, but also more frequent, with the progress of labor) abated. There were but two paroxysms in the course of nine hours after the injections had been made; while before there had been three fits within less than two hours.—*Phila. Med. and Surg. Rep.*

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INSANITY IN PARIS.—It is stated by the French press that lunacy is much on the increase in Paris. It is certain that recently a considerable number of eccentric and insane persons have publicly exhibited their peculiarities in such a manner as to call for restraint. This may be an accidental and temporary condition of affairs. Twice during the last few days the police have arrested three persons who were openly committing acts of insanity in public places. On Saturday week, three lunatics successively applied for admission at the Tuileries, seeking an audience of the Emperor Napoleon on various pretences.—*Lancet.*

THE  
Pacific Medical and Surgical Journal.

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Selections.

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From the London Lancet.

On an Injurious Habit occasionally met with in Infancy  
and Early Childhood.

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BY ATHOL A. W. JOHNSON, ESQ., F. R. C. S.,

Surgeon to the Hospital for Sick Children; Lecturer on Physiology at St. George's  
Hospital.

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THE subject of this communication is one of high importance in its relation to the physical as well as to the moral well-being of too large a number of persons in early life. Its repulsive nature, however, and the natural desire to ignore the existence of such a practice as onanism, have prevented the attention of our profession from being willingly turned to it, and have caused too frequently those who are actually suffering from its effects, or who can be terrified into the belief that such may be the case, to fall easy victims to the rapacity of advertising quacks and of ignorant extortioners. Even now, I shall gladly confine my observations to the disease (for such it really becomes) of onanism as we meet with it in infancy or in early childhood.

The following case, which I was lately urged to take charge of at the Hospital for Sick Children, will serve as a fair specimen of the course the affection takes, the origin from which it may spring, and the consequences it may induce.



George A—, six years of age, was admitted under my care in January of the present year. He had been in good health till he was two years and ten months old, at which time he was sent from home into the country, where he was put to sleep with a girl fourteen or fifteen years of age. Soon after this his health appeared to fail, and he became weak and ailing, but without any definite malady. Under tonic treatment some improvement took place, followed, however, by frequent relapses, and five months ago a new symptom manifested itself in the shape of deafness. He was then removed to London and again came under the care of his parents, who were distressed to find, in addition to his deafness, that his appearance was much changed, and that from being a fine stout child, he had assumed the aspect of a little old man.

It was soon noticed that his hand was frequently applied to his penis, which was often in a state of erection, and that the prepuce was somewhat elongated. He was taken to a dispensary, where he was sounded, under the impression that a calculus might be present, but no stone was detected, and in fact no irritation of the bladder really existed. Suspicions arising on the part of his parents, a close watch was set upon him, when it was discovered that he was nightly in the habit of practising onanism. To put stop to this, various means were adopted, including severe punishments by his father, after which he would promise to abstain, but during sleep he would get restless and excited, and on waking up continue the practice, *emission taking place*.

His hands were then fastened out of bed, but he still effected his purpose by a peculiar convulsive or instinctive movement of the thighs. Repeated immersion in cold water at these times, and all other plans suggested having been employed ineffectually, as a last resource he was brought to the hospital. The child confesses readily that the practice began from the time of sleeping with the girl, and that it has been continued at least once nightly ever since. He promises and appears anxious to leave it off, but owns that he cannot restrain himself when he gets excited.

He was directed to sleep with his hands out of bed, and under the immediate surveillance of the night-nurse. After the first night or two, the restlessness and movements were resumed, but of course immediately arrested. He was then placed on *bromide of potassium*, and afterwards on *belladonna*. Perfect cleanliness was inculcated, especially with regard to any secretion between the foreskin and the glans; and bathing, &c., ordered. At the same time, he was informed that it would be necessary, on account of his health, if the practice continued, to perform an operation, with the hope that the dread of this might prove effectual; but the nocturnal excitement still continued, and I have at last removed a portion of the foreskin, *without placing him under chloroform*. Since the operation he has been perfectly quiet, and he has now left the hospital, with instructions that he is to be brought back if any relapse occurs.

This case shows us how deeply rooted the vicious habit may become even at a very early age, for it was probably commenced in this instance soon after the child had attained his third year; it also points out the ill consequences which may arise from placing male children to sleep with young females, and the care which should be taken in this respect even in infancy. My attention has been the more drawn to this danger from my having another case at the same time under my care at the children's hospital, in which a boy seven years old was admitted with severe gonorrhœa and buboes, apparently contracted from a servant girl fifteen years of age, with whom he had been in the habit of sleeping.

It must not be thought that the case of onanism I have related is a very exceptional one, nor that it is confined to the male sex, for it prevails amongst very young girls much oftener than is generally supposed. Many writers

have noticed the very early age at which children give themselves up to it; Barthez and Rilliet, for instance, in their celebrated work on the "Diseases of Children," state that it cannot be concealed that "it is often very young children who abandon themselves to it with fury;" and they place this amongst the causes which may give rise to tuberculosis. M. Marjolin is reported, in the *Gazette des Hopitaux*, to have stated that "the youngest children are not exempt from the vice; that it is observed at the Hopital des Enfants Malades, and even sometimes, which may appear almost incredible, in children still at the breast." Fournier and Begin assert that they have several times observed it in infants, and detail the case of a girl four years of age, who gave herself up to masturbation, as it were instinctively. The real nature of the affection was not discovered for four years, and notwithstanding the means adopted, the child ultimately expired in a state of frightful marasmus, carrying on the practice to the very last moment of her existence. Vogel, too, alludes to a little girl three years of age, in whom repeated attacks of epilepsy occurred, after onanism had been indulged in for six months. Zimmerman notices the frequency of its occurrence; and Dr. Van Bambeke relates three cases in children from ten to twenty months old, the first child being a male, the other two females.

In infancy, and even at a slightly more advanced age, the attention of the parents is the less directed to the practice because the hand is commonly not employed, the irritation being effected by a kind of convulsive movement of the thighs, as was seen in the boy at the Children's Hospital. These movements, when noticed, are naturally not attributed to their real cause, but referred to the irritation of worms, or to some other innocent origin, and allowed to go on unchecked.

According to Dr. Van Bambeke, who has written an interesting article on the subject in *L'Union Medicale*, the face of the infant at this time becomes injected and covered with sweat, the eyes are brilliant, and the child is abstracted from objects around. It generally lies down rather than sits, fixing itself against some object by way of fulcrum. The spasmodic condition, he continues, is followed by pallor and depression; and in one of the little girls, in whom the periods of excitement were very frequent, the erectile organs had acquired a pretty considerable development.

The consequences of this practice are probably more serious at an early age than at a later period. In infancy the nervous system, especially its excitomatory portion, is highly excitable, and its functions are performed with great activity; but reaction and subsequent exhaustion are keenly felt. It is probable, therefore, that the repeated and violent excitation of this system may lead to derangement as regards both its intellectual and organic functions. The irritability of the mind and body, the peevishness, the alteration of the habits and general tone, together with the deterioration of the mental faculties occasionally observed in children, may, possibly, in some cases be attributable to this cause, and be the less amenable to treatment, as their origin is hardly likely to be suspected. The disturbance of the nervous system is attended usually with some derangement of digestion and nutrition—functions of the highest importance at this age. The appetite becomes capricious, the muscles get weak and flabby, there is general wasting, and in some cases, a decided state of marasmus. I have already stated that Barthez and Rilliet place this vice among the causes which may lead to tuberculosis.

The special senses, too, are occasionally impaired; that of hearing, for example, in the child whose case I have given; and of vision, as noticed by Mr. Kane, who attributes some forms of night-blindness as well as of amaurosis to indulgences of this description. I may mention also, that Marjolin\*

\* *Gazette des Hopitaux*, 1858.

asserts that "almost all children affected with Pott's disease" (of the spinal column,) "give themselves up to onanism with a sort of fury," though whether, supposing any connection to exist between the two, the disease of the spine is the consequence or the cause of the practice may possibly admit of a question.

As a predisposing *cause*, we may probably refer to the excitability of the nervous system in early life, which is much more marked—at least as regards the generative organs—in some children than in others, and varies, perhaps, in different nations; for I hope that in this country the habit in question is more uncommon than would appear to be the case in France. At the period of dentition, this irritability of the nervous system is more noticeable; and Dr. Van Bambeke is inclined to assign the origin of the practice, in many cases, to this cause.

Everything, however, which contributes to the excitation of the genitals may lead to the evil, for an act from which a pleasurable sensation is once experienced by the infant, may, unfortunately, degenerate into a habit. When suspicion, therefore exists, great care should be taken with respect to the child's bed, which should be neither too soft nor too warm whilst the custom should be early acquired of sleeping with the arms outside the clothes. In males, a deposit of sebaceous secretion under the prepuce, and around the *corono glandis*, frequently occasions considerable pruritus, especially when a tendency to phymosis is present; and in both sexes the irritation of the parts from the existence of herpetic or other slight inflammatory affections may induce masturbation. The genital organs, therefore, ought in all cases, to be carefully examined, and any source of irritation at once removed. The existence of thread worms in the rectum, or between the labia, where they may often insinuate themselves, should likewise be sought for, and means taken for their extirpation. The condition of the urine also should be attended to, for irritation of the neck of the bladder, from certain conditions of this secretion, leads to great excitement of the genitals, and, not unfrequently, to their being pulled about, as is seen so commonly in cases of actual or suspected stone.

In infancy, if these points are looked to, and if care is taken instantly to check the movements as soon as the attention of the mother is directed to their nature, a victory may soon be gained; for the surveillance in these cases, as Dr. Van Bambeke remarks, is easy, the infant seeking no concealment. Cleanliness, of course, is of the greatest importance, and the sudden dash of cold water over the parts at the very time of the excitement, will, perhaps, produce such a shock as to arrest the practice at once and forever.

At a somewhat later age—that is, in early childhood—when the habit has been persevered in for some time, the cure becomes more difficult. Any appeal to the moral sense, or any description of the evil consequences which may ultimately ensue, though recommended by some authors, I believe to be not merely useless, but injurious. If the child has not already acquired the vice, you run a great risk of teaching it to him; and if he has, an indefinite and unknown future evil will never lead such a child to abandon a present gratification. Great prudence, therefore, should be exercised in our investigations; and it may be desirable to be acquainted with a test which Dr. Doane asserts will enable us occasionally to recognize the existence of the practice—namely, the examination of the urine, which will present shortly after the completion of the paroxysm, some mucus mixed with crystals of oxalate of lime.

The same care should be exercised at this age as in infancy in the removal of any exciting cause which can be discovered; the greatest cleanliness should be enjoined, cold bathing ordered, and the condition of the urine carefully attended to. During the day, a full amount of muscular exercise should be enforced, so that at night the consequent fatigue should render

sleep prompt and necessary. Careful surveillance should be employed, and the hands kept outside the bedclothes, or actually fastened down; in extreme cases, too, we may adopt a kind of shield of gutta percha, or other suitable material, so constructed as to prevent friction of the parts either by the hand or in the manner already alluded to. I have made a short trial of the bromide of potassium, in consequence of its asserted emasculating properties; and of belladonna, on account of its great power in relieving the irritation which leads to nocturnal enuresis; neither of these remedies, however, had much effect.

The means I have related will often fail of even temporary benefit, for the act can be accomplished simply by the muscular movements already alluded to. In such cases we must, I believe, break the habit by inducing such a condition of the parts as will cause too much local suffering to allow of the practice being continued. For this purpose, if the prepuce is long, we may circumcise the male patient with present and probably with future advantage; the operation, too, should not be performed under chloroform, so that the pain experienced may be associated with the habit we wish to eradicate. In the female, Dr. Gros has advocated, in like manner, complete or partial amputation of the clitoris; this, however, would seldom be called for, except, perhaps, in those cases where furious masturbation is associated with congenital malformation of the organ.

In both sexes, if the use of the knife should be considered unavoidable, and the practice still continues after all obviously exciting causes have been removed, various irritating applications may be used locally, so as to render any movements of the parts painful. These are most likely to be called for in boys, for in female children, with the exception of the congenital cases I have alluded to, the practice seems to be more easily checked by surveillance than it is in males.

In conclusion, I have only again to call attention to the great care and caution to be exercised in the selection of those, whether of the same or the opposite sex, with whom we allow children even of tender years to sleep or to associate familiarly. Bad habits are easily acquired, but are lost with difficulty; ill health at the time and formidable disease in the future, mental impairment and moral degradation, may be the lamentable consequences of negligence in this respect on the part of the parents.

*Albemarle Street, 1860.*

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**SUBCUTANEOUS INJECTION OF A SOLUTION OF ATROPINE IN TETANUS.**—While this form of medication is now attracting much attention, it becomes our duty to record such clinical facts as bear upon the subject. In one of the recent meetings of the *Societe de Chirurgie*, at Paris, we are informed by the *Gazette Hebdomadaire*, a case of traumatic tetanus was reported, occurring in the practice of a distinguished provincial physician, Dr. Pescheux, in which this treatment proved entirely successful. The patient had received, from the fall of a chimney, among other injuries, a complicated fracture of the leg. All went well until the fifteenth day, when Dr. Pescheux conceived the idea of practicing a subcutaneous injection of sulphate of atropine on the medium line of the nape of the neck. It was done; the symptoms of atropine poisoning became very well marked. When these subsided the tetanic symptoms also had almost completely disappeared; deglutition became easy, the rigidity of the muscles was lessened. In the evening another injection dissipated what remained of the tetanic symptoms.—*Medical and Surgical Reporter.*

From the London Lancet.

### Physicians in China.

WE are so often stupefied with the pretensions and amazed at the absurd theories of English and continental quacks, that it is a refreshing amusement to go further afield and note the unsophisticated follies of a race of men who really believe the nonsense which they talk, and who are accredited with a curative power which is held by millions to be not inferior to that of the homœopath or kinesiopath. In some capital pictures of China, drawn by the pen of Mr. Cobbold, long resident in Canton, we find a sketch of the habits and theories of the Chinese physician which abounds in characteristic touches.

In China there is free trade in physic—a good principle enough, but which has not yet led to all the desirable reforms in that art. A dose of Chinese medicine is quite a curiosity. It is about the size of half-a-pound of moist sugar, and consists of twenty separate packets—four or five kinds of bark, a little orange-peel, some walnuts, some gentian, and half-a-dozen other sorts, not unlike a small cake of blacking. These are all boiled together, and a good half-pint of the decoction is to be taken *quite hot* as a dose.

The lowest fee for a visit is 60 cash, or about twopence, and the coolies of the sedan have also to be paid. The fee advances by 60 cash at a time, so that 60, 120, 180, 240, &c., are the rates according to celebrity; very seldom, however, is a single visit charged more than 180 cash, or sixpence.

When you consult a physician, his mode of proceeding is this:—He lays your hand on a soft cushion, feels your pulse at the wrists, asks your age and the symptoms of your indisposition, looks you attentively in the face, sapiently strokes his mustache, and then writes his prescription—perhaps “150 pills twice a day.”

The principles upon which the prescriptions are founded are at least as complicated as the dose prescribed. According to the Chinese physiology, the human constitution is compounded of King, Mich, Shwny, Ho, Too—that is to say, Gold (metal), Wood, Water, Fire, and Earth. These are combined in various proportions, so that if all remain in harmony, a man is in perfect health. If any one predominate, and acquire undue ascendancy, his system is deranged and he suffers. This fanciful physiology has a theological connection. Each element has its presiding deity, and once a year grand feasts are held in honor of the five deities. At this time the streets are busy with men passing rapidly about in brick-red garments, with manacled hands, wildly dangling their chains, and accompanied by children, similarly attired in prison dress, and calling themselves “culprits.” These are persons who have been visited by severe illness during the year, and are thus seeking to honor the gods of the five elements. The connection of this theory with the Chinese practice is amusingly illustrated by the observation addressed to Mr. Cobbold by a native physician, who was much concerned to see him eating so much roast meat, until he observed another habit, which sets his mind at rest. He said—“Senior, I used to be distressed when I saw you eat so much roast meat; but now I see why it does not injure you: you drink large draughts of cold water, so that the fire is put out.” With all this, it seems that they have practical success in the use of simples.

No previous examination is required for practice. The field is entirely open. Perfect free trade prevails in the profession. It is thought that no restrictions are necessary, but that people may safely be left to their own choice of a physician; and if they suffer, it is their own fault, and they must blame themselves. *Caveat ager!*

From the New York American Medical Times.

**Malposition of Fœtus Detected by External Manipulation during Labor.—Cephalic Version by the same Means,—Successful.**

THE following interesting and highly practical questions in obstetrical science have recently been agitated among those devoted to that branch of medicine. 1. Can a malposition of the fœtus in utero be detected by external manipulation prior to labor? and, 2. Can such malposition be rectified prior to labor by external manipulation? Some of the leading professors of obstetrics in this country have taken strong grounds in the negative, and several not only denying the possibility of detecting and correcting malpositions prior to labor, but even questioning the professional honesty of the practitioner who should endeavor to determine by external examination, prior to labor, whether a malposition existed. The following case, which occurred in Bellevue Hospital, a few days since, under the care of Dr. Barker, is a most important contribution to this subject. We copy the notes of the case, furnished us by Dr. E. B. Barrett, House Physician :

Mary Ann ———, æt. 17, born in Ireland, was admitted to the Waiting wards of the Bellevue Hospital March 19th, 1860, in her first pregnancy. On examination, the uterine tumor was very conical, projecting markedly to the right, as well as forwards, triangular in shape, with its transverse diameter greatest. The os uteri was dilated to the size of a quarter of a dollar, and dilatable. The membranes were very full, and projected strongly from the os, and so tense were they that no part of the child could be felt from danger of rupturing them. On the following morning, as the pains had somewhat exhausted the patient from their teasing character, and as little or no progress was being made, an opiate was administered, from which the patient was enabled to obtain some sleep, awaking much refreshed at 12 M., (the 4th.) The pains now increased in force and frequency, but with no result, save the further dilatation of the os, which was now between two and three inches in diameter. On vaginal examination no part of the child could be felt without rupturing the membranes; by palpation the previous conjecture, viz., that a transverse presentation existed, was rendered nearly certain.

Dr. Barker came to pay his daily visit at this juncture, and concurring in the opinion that the child presented transversely, decided on immediate interference. Accordingly the patient was brought under the influence of chloroform. Dr. Barker again examined the tumor more carefully, both by palpation and "per vaginam." Through the external walls the head could be felt in the left iliac fossa, above the pubis. The pelvic extremity of the fœtus was in the right iliac fossa, and the curve of the dorsum could be traced strongly projecting forwards. By a vaginal examination the os was found dilated to the diameter of about three inches, soft and dilatable, with a very large and projecting bag of waters. The presenting part of the fœtus could not easily be felt through the bag of waters, and no force was used for fear of rupturing the membranes; but the deduction, from the external and vaginal examination, was, that the right shoulder was the presenting part at the superior strait. Dr. Barker therefore decided to attempt cephalic version, in preference to the ordinary method, and he at once proceeded to operate, in the presence of several members of the medical staff of the hospital. The patient being brought to the edge of the bed, in the approved position, he first manipulated by attempting to elevate the pelvis of the fœtus with his

left hand, and to depress the head with the right, acting only when it was found that the uterus was not contracting. Finding that he had essentially changed the position of the fetus, the right hand of an assistant was placed to make strong pressure over the left iliac fossa; he (Dr. B.) still elevating the pelvis of the fetus with his left, introduced into the vagina two fingers of the right, and during the time of uterine contraction ruptured the membranes, when the waters escaped with great force and abundance. The head could now be felt in the superior strait in the *left occipito* iliac position. The administration of chloroform was now discontinued, in the hope that the uterus would complete the delivery unassisted. Slight pains, with little progress, followed for fifteen minutes, and as the fetal heart was beating somewhat feebly, it was deemed necessary to apply the forceps. The forceps being applied, a male child, weighing eight pounds, was extracted in a partially asphyxiated condition. Respiration was established in a short time, however, and it is now a perfectly healthy child. The placenta came away in five minutes, with no more than the usual amount of hemorrhage; the perineum was not lacerated, and the patient but little more prostrated than is usual after natural labor. The patient proceeded to a rapid convalescence, with no unfavorable symptom, notwithstanding the prevalence of an epidemic of puerperal fever in the hospital at the time of her confinement.

In his clinical remarks upon the case, Dr. Barker contended that he had demonstrated beyond cavil—1. That a malposition of the fetus in utero can be detected by external manipulation during labor. Auscultation furnished but slight assistance, and the results of an internal examination were entirely negative. The important fact, however, worthy of special notice is, that the position of the fetus could only be determined when the uterus was in a quiescent state. It follows, therefore, if the most favorable time for detecting the position of the fetus is in the interval between contractions, that a malposition can be made out by external manipulation prior to labor; and if the position can be discovered in the interval of the pains of labor, it can also be done one, or two, or even many days before labor. 2. This case demonstrates the possibility of performing version by external manipulation during labor, and, as version by the hand introduced into the uterus was attempted in the absence of pain, he thought this case equally proved that version by external manipulation is possible before labor. But to have the fetus remain in its new position it would be necessary to rupture the membranes and induce labor, in order to secure the engagement of the head in the pelvic cavity.

**A SAD PICTURE OF ALCOHOL AND ITS DOINGS.**—Prof. S. H. Dickson, in his late introductory lecture before the students of Jefferson Medical College, says:—"All Christendom should shudder at hearing that while yet the asylum for habitual inebriates, undertaken to be built by the munificent State of New York, is not half finished, applications have been made for reception by not less than *twenty-eight thousand* of these unfortunates; of which number—it is enough to make one's heart bleed to record it—upward of four hundred were *women*! Not women of the parish cast, which society makes, and then tramples in the mire, but women in a condition—either of themselves, or through their friends—to bear the expenses of such accommodations." No stronger argument than this need be offered for the utility of such an establishment, and we trust that the day is not far distant when asylums for inebriates will be erected in every State in the Union.—*American Medical Gazette*.

From the Medical Times and Gazette.

## The Mental Peculiarities and Disorders of Childhood.

BY CHARLES WEST, M. D., ETC.

No one can have watched the sick-bed of a child without being struck by the almost unvarying patience with which its illness is borne, and the extremity of the peril from which, apparently in consequence of that patience, a complete recovery takes place.

No sorrow, gloomy foreboding, remorse, disappointment, nor anxiety, depresses the spirits and weakens the vital powers. Death, in general, brings no alarm. To keep the child happy, remove all causes of alarm, suffering, and discomfort; modify the treatment so as to escape a struggle with weariness, and if death appears imminent, look at it from a child's point of view; all these are duties of the utmost importance both for physician and parents.

The mind of the child is feebler than that of an adult, but is proportionally active, and vivid in its imaginations. The child who dreads solitude, and asserts that it hears sounds or sees objects, often tells a literal truth. The sounds have been heard; in the stillness of the nursery, the little one has listened to what seemed to be a voice calling it; or, in the dark, phantoms have risen before its eyes, and the agony of terror betrays an impression far too real to be explained away, or to be unsuitably met by hard words or unkind treatment.

Disorder of the cerebral functions greatly exaggerates these impressions. Hence, the circumstances surrounding a child, whether in health or disease, are of vast importance, and should never be lost sight of in the treatment.

The passions, too, of a child, are exaggerated as a general rule. Reason as yet does not govern its caprices. There is also an intense craving for sympathy, which sometimes becomes quite uncontrollable, and requires as much care and judicious management as in the case of an adult monomaniac. As in diseases of the body, so in affections of the mind in early life, the power of repair causes a constant hope, which is not to be indulged in the cases of adults. Dullness, apathy, and cerebral disturbance have, therefore, not so grave an import as at a more advanced age. The whole of the intellectual energy is expended on the child's commerce with the world; his relations to it are disturbed, hence, the want of interest, the slowness to resume the lively prattle after sickness should not be viewed with too much apprehension. The memory of a child is feeble, and when recovery takes place, it has to learn again its old lessons, and with weakened faculties. This process will extend over a longer time in proportion as it was younger at the time of the illness.

One thing should be remembered, in protracted illness, even when unaccompanied with disorder of the brain—the sense of hearing may be impaired, and this may be one cause of the child's dullness. The arrest of development, or the positive retrocession of the mental faculties, is of far less import than any perversion of the moral powers. The child who, in spite of dullness, manifests the ordinary childish feelings, may be much improved by judicious training. We must also, in forming an estimate of these capabilities, consider the accompaniments of the sickness. Convulsions or serious cerebral disturbance will correspondingly impair more profoundly the intellectual powers, and retard the recovery. It must be remembered that a very large number of children whose progress has been arrested at a very early



age are allowed to grow up without any culture, and much of their dullness may be due to neglect. Apart from congenital instances, where mind and body are alike arrested in development, or are alike feeble and deformed, the state of the moral powers are more important as a guide to the prognosis than the condition of the intellectual. Want of affection, mischief, spite, causeless rage, are less hopeful than intellectual dullness, and the first step should be the establishment of moral control. It should be borne in mind that the heart may break or reason fail under causes seemingly insufficient, and the griefs of childhood may be as overwhelming as those of the strong man. The intellectual powers should never be overtasked. Thus may be laid the foundation of hydrocephalus, or the tubercular cachexia, the destruction of the nervous system or serious injury to the moral character.

Occasionally, children exaggerate their ailments, or feign those which have no existence, and they will put up with scanty fare and painful treatment as long as they can engross attention, and be the centre around which the household turns.

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From the North American Medical Chirurgical Review.

### Statistics of Insanity in the United States.

BY RICHARD J. DUNGLISON, M. D.,

Physician to the Burd Orphan Asylum and to the Albion Society.

STATISTICS of physical or mental infirmities interest the curious inquirer more often than they reward the zeal of the compiler. The reason is obvious; a few new facts of little consequence, or a few old ones with which he has been unfamiliar, become magnified as objects of importance in the eyes of the one, while the patience of the other receives but slight satisfaction in the paucity of useful materials separated from the confused mass of details. Matters of slight moment are dwelt upon, considered and reconsidered, while what is truly important is thrown aside, rejected as worthless, or left to the exploration of more careful observers. The latter must always, of course, in numerical strength, be the fewer, but the grand results so often obtained by patient investigation preserve the memories of their authors, when those who have devoted themselves to unimportant abstractions have been forgotten, and their results have passed away with them.

Perhaps statistics of infirmities of the organs of the senses furnish as striking an exemplification of this fact as any other sources of statistical information. The institutions devoted to the care and comfort of the blind, deaf-mute, and insane portions of the population, do not appear equally to appreciate the value of general information upon points on which professional and unprofessional are eager to acquire knowledge. How often are we told, as if they were almost the only points which could possess any interest to us, that the institution has expended so much in the course of the year for groceries and provisions, and has laid out its grounds in such a scientific and ornamental style of gardening as to excite the admiration of all beholders! To become truly useful sources of practical information, we need, rather than an advertisement of this kind, an enumeration of all the facts bearing upon the causes of predisposition to certain morbid affections of the senses, a personal history of the patient's condition, sex, and age, an account of the greater prevalence of mental disease in one district of country than another, the influence of marriage, sex, and constitution, on recovery or the reverse,

and the numerous other channels through which lessons may be learned to guard us from the incursion of disease, or to assist us in relieving the infirmities to which we are subject.

If we could only bring home to our minds the consciousness of the fact that we are all exposed to most of the causes, of one kind or another, which predispose or excite to blindness, deaf-dumbness, or insanity, the world at large would be much less indifferent than it now is to considerations which seem at present to possess direct interest to comparatively a small proportion. It is not easy to impress this conviction upon the mind, and perhaps it may be as well that people generally should remain indifferent to it; the gloomy contemplation would assuredly not add much of happiness to the cares of every-day life. The truth is only mentioned to show how much wider the field of accurate statistical information might become, if more general interest were excited in such subjects of universal consequence.

We are, of course, dependent upon the accuracy and careful scrutiny of others for the mass of statistics through which we must search for the elimination of but few important details. If such authorities were unanimous in their mode of arrangement, and in their knowledge of what should be accepted as useful and what might be unhesitatingly rejected as worthless, if some uniform understanding of the wants of the professional and unprofessional could be arrived at, how greatly might the whole matter of statistics be simplified! It is by no means a grateful task, while aiming at unexceptional accuracy, to discover how much disorder has been thrown into statistical records by the total carelessness, or only near approximation to accuracy, of those who should be the most worthy sources of information. If some system of classification were adopted which would furnish facilities for the collection of facts, and be uniformly applicable to every institution in which the blind, or the deaf-mute, or the insane are cared for, the slight additional trouble of registration would be amply compensated for by the grateful appreciation of those interested in human infirmities.

Insanity, in all its phases of mental and moral perversion, is fully described in works devoted to special and general pathology. The purpose of this article is to avoid all such points as refer to symptomatology, diagnosis, or treatment, and to adhere, as far as practicable, to facts which may be confirmed or established by the numerical records and the enlarged experience of those who have devoted special attention to the subject. A complete statistical history of insanity from European and American sources is almost impracticable. Continental authorities are often inaccessible, and from a few scattering details in countries whose language is unintelligible to the rest, we can make no inferences which are worth recording. Our own country is rich in the registered history of mental ailments, and from these channels it is proposed to make such deductions and collect such materials as may furnish a condensed history of insanity in the United States. As the reports of institutions for the insane are the most prolific records it is in our power to consult, we shall collect from them statistical information upon prominent points of interest connected with the insane, having previously considered such facts, meagre as they are, as have been furnished in the details of the United States Census of 1850. We may therefore appropriately touch first upon the statistics of the insane among the general population, and afterwards upon institutions devoted to their care. We shall refer merely to those cases of mental alienation which occur from perversion of intellectual and moral qualities, and exclude entirely all reference to congenital cases of defective mental development, embraced under the head of Idiocy.

#### STATISTICS OF THE INSANE AMONG THE GENERAL POPULATION.

Information on the number, etc., of the insane in this country can only be obtained through the details of an imperfect census. How little or how much

reliance can be placed upon it, we cannot now argue; but adopting as our standard the results which it has furnished, we are able to make certain estimates of the influence of race, of the proportionate numbers of this class of unfortunates in different states, and other points of interest which may have some value to statisticians, however accurate or inaccurate the figures may be. In referring to census details we become involuntarily disbelievers in the idea that figures are infallible, and we condemn the laxity with which facts are collected, although we employ them almost as freely as if they were the most accurate results that census-takers could accomplish. The few facts obtained from the census of 1850 are embraced in the following tables:

1. *Comparison of Insane, Blind, Deaf, and Dumb, etc.*—The following table, in an aggregate of 50,994 cases of infirmities of sense or the senses, exhibits the proportion of insane to the other classes in the general population:—

Insane	-	-	15,610, or 1 to 1485 of general population.		
Idiots	-	-	15,787, or 1 to 1469	"	"
Deaf-mutes	-	-	9,803, or 1 to 2365	"	"
Blind	-	-	9,794, or 1 to 2367	"	"

The blind approximate closely the number of the deaf and dumb, while the insane and idiotic classes are not widely apart from each other. The insane are more than 60 per cent. more numerous, if we can place reliance on these estimates, than either the blind or deaf-mutes.

*In every 100,000 of the Population (Census 1850) there are:*

Insane	-	-	67	Blind	-	-	42
Idiots	-	-	58	Deaf-mutes	-	-	42

2. In a previous article upon deaf-muteism,\* we referred to the greater prevalence of that infirmity among the native than among the foreign population. If we adopt a similar mode of classification with the insane, excluding slaves only, we shall find insanity far more prevalent among the foreign-born than among the native population.

#### PROPORTION OF INSANE IN THE NATIVE AND FOREIGN POPULATION.

STATES.	Native Insane.	Native Population.	Proportion to Pop.	Foreign Insane.	Foreign Population.	Proportion to Pop.
New England, . .	3,375	2,423,223	1: 718	412	299,340	1: 726
New York, New Jersey, and Pennsylvania, . . . .	3,667	4,884,356	1: 1332	1,029	1,005,036	1: 976
N. W. States and Territories, . .	1,963	4,656,158	1: 2372	340	638,784	1: 1878
Slave States, etc., .	3,860	5,534,813	1: 1434	268	232,839	1: 870
	12,865	17,498,550	1: 1360	2,049	2,175,999	1: 1061

Change of mode of living, intemperance and dissipation, the frustration of fondly-indulged hopes of success, reverses of fortune, etc., are very often followed by insanity, and these, we imagine, operate powerfully among the foreign-born population. In the words of one of the New England Institutions: "Driven from their early homes by poverty, ignorance, and delusive

\* "Observations on the Deaf and Dumb," reprinted from the N. A. Medico-Chirurgical Review, Philadelphia, 1858.

hopes, they are thrown on our shores, and left to contend as they may with the new circumstances around them, until disappointment or sickness, or intemperance, or other form of vice, extinguishes the feeble light of reason, and consigns them to a lunatic hospital. They are unpromising patients. They do not recover in so large a proportion as others, and consequently contribute largely to swell the number of incurable cases which crowd the wards of our hospitals."<sup>a</sup>

We do not offer any explanation why mental alienation should attack the foreign-born in so large a proportion in some States, nor why they should be attacked in a proportion in the New England States no greater than exists among the native born. Reasons doubtless exist, which must be apparent to those familiar with the intimate domestic arrangements, habits, and feelings of each class.

3. *Influence of Race.*—It will be seen, by the following table, that insanity is far more prevalent among the white and free colored population of the United States than among the slaves. It would be natural to suppose that absence of care and freedom from anxiety as to the future would tranquilize the mind, and ward off disturbing elements. The condition of a happy slave, thinking only of the present, and not dreaming of want in the future, would appear to be that which should give rise very infrequently to causes of insanity. Intemperance, so fruitful a source of misery and unhappiness to the white and free colored, is comparatively unknown among the slave population, every slaveholder striving to prohibit the use of alcoholic liquors, and dreading the proximity of taverns or drinking-places, which can supply unlimited indulgence to his slave. Hence, intemperance itself does not exist as a cause of mental alienation, nor can the thousand evils it always brings in its train—disease, exposure, excesses, etc.—be worthy of consideration as causes of insanity. Anxiety would be a far more productive source of mental disease to the free colored population, from the fact that they have to contend at a disadvantage with the whites in many of their occupations and modes of earning a livelihood. It would be interesting to pursue these inquiries further than they have already been carried, to determine what causes are mainly at work to produce insanity among the colored race, and why in some portions of the country—New England and Delaware, for example—the proportion should be so large. It may be remarked, however, that in a small population, in Maine, for instance, the number of insane must be so small that no very reliable deductions can be founded upon such meagre statistics. Yet New England, which contains but about one-thirtieth of the free colored population of the Union, had within her limits nearly an eighth of the free colored insane. Ohio, with a larger free colored population than that of all the New England States, had, in 1850, but one-third as many insane; while Maryland and Virginia had but two and a half times as large an insane free colored population as New England, although having more than five times the number of free colored in the general population.

In inserting the following table, which has been carefully prepared from the census of 1850, we desire to correct an erroneous conclusion which has crept into a valuable statistical work—*Boudin's Traité de Géographie et de Statistique Médicales, etc.*, Paris, 1857 (vol. ii. p. 143)—in consequence of figures adduced by Dr. Nott, of Mobile, to show that the farther removed the negro may be from the tropics, the more liable will he become to mental alienation.† M. Boudin asks: "Of what consequence is it, if the negro is able to succeed in living and even of perpetuating his race in a temperate

<sup>a</sup> Third Annual Report of the State Lunatic Hospital at Northampton, Mass., 1858, p. 31.

† J. Nott, M. D. Two Lectures on the Natural History of the Caucasian and Negro Races. Mobile, 1844.

zone, if it should be shown, as has been attempted, that he becomes insane there in an enormous proportion?" A reference to the table disproves this assertion, and answers M. Boudin's questions satisfactorily. The farther north we go, the less numerous do the slaves become, until at last we find all the colored race free. It is then that causes of insanity become multiplied to them, while climate, which is not a powerful cause of perversion of the mental and moral faculties, would operate more actively as a predisposing cause of idiocy.

*Influence of Race in the production of Insanity.*

(CENSUS OF 1850.)

	STATES.	White Insane	Proport'n to White Populati'n	Free Col. Insane.	Proport'n to Fr. Col Popula'n	Slave Insane.	Proport'n to Slave Populati'n
6 New England States.	Maine, . . .	556	1 : 1046	5	1 : 271		
	New Hampshire,	378	1 : 839				
	Vermont, . . .	560	1 : 560				
	Massachusetts, .	1661	1 : 593	19	1 : 477		
	Rhode Island, .	210	1 : 685	7	1 : 524		
	Connecticut, . .	464	1 : 782	6	1 : 1282		
3 Middle States.	New York, . . .	2487	1 : 1225	34	1 : 1443		
	New Jersey, . .	370	1 : 1258	9	1 : 2634		
	Pennsylvania, .	1865	1 : 1210	49	1 : 1094		
15 Slave States and Dis. of Columb.	Delaware, . . .	48	1 : 1482	20	1 : 903		
	Maryland, . . .	477	1 : 876	44	1 : 1698	25	1 : 3614
	Virginia, . . .	864	1 : 1035	47	1 : 1156	59	1 : 8008
	North Carolina, .	467	1 : 1184	10	1 : 2746	33	1 : 8743
	South Carolina, .	224	1 : 1225	4	1 : 2240	21	1 : 18330
	Georgia, . . .	294	1 : 1774	2	1 : 1465	28	1 : 13631
	Alabama, . . .	201	1 : 2122	2	1 : 1132	30	1 : 11428
	Florida, . . .	91	1 : 5245			2	1 : 19655
	Mississippi, . .	105	1 : 2816			24	1 : 12911
	Louisiana, . . .	144	1 : 1774	11	1 : 1587	45	1 : 5440
	Texas, . . .	37	1 : 4163				
	Arkansas, . . .	60	1 : 2703			3	1 : 15700
	Missouri, . . .	249	1 : 2377	2	1 : 1309	11	1 : 7947
	Kentucky, . . .	502	1 : 1516	2	1 : 5005	23	1 : 9173
	Tennessee, . .	380	1 : 1991	5	1 : 1284	22	1 : 10884
	Dis. of Columbia,	13	1 : 2918	9	1 : 1117	1	1 : 3687
7 West'n States and 4 Terri- tories.	Ohio, . . .	1303	1 : 1500	14	1 : 1805		
	Indiana, . . .	556	1 : 1757	7	1 : 1609		
	Illinois, . . .	236	1 : 3584	2	1 : 2718		
	Michigan, . . .	132	1 : 2992	1	1 : 2583		
	Iowa, . . .	42	1 : 4568				
	Wisconsin, . . .	54	1 : 5643				
	California, . . .	2	1 : 45817				
	Minnesota, New Mexico, Utah, and Oregon, . .	22	1 : 4181				
	TOTAL, . . .	14972	1 : 1305	311	1 : 1397	327	1 : 9799

4. The question may arise, *Has insanity increased in the United States in a greater ratio than the population?* Discrepancies certainly exist between the censuses of 1840 and 1850 sufficient to warrant us in forming one of two hypotheses: either insanity has been on the increase or the returns of the census upon this point are unreliable. We are more disposed to assume the latter position, for reasons which have already been stated. In the census of 1840 the idiotic and insane were not separated in the statistics, while in 1850 an independent enumeration of each class was made. We cannot more appropriately refer to questions arising out of the comparison of the two censuses, than by citing the remarks of Prof. George Tucker\* on the results obtained in each: "By this comparison it appears that of the insane and idiotic—

In the white population,	the proportion in 1840 was as 1 in	977
" " " " "	1850 was as 1 in	688
In the colored	" " " "	1840 was as 1 in 978
" " " " "	1850 was as 1 in	1929

The suspicions entertained against the accuracy of that part of the census of 1840 which respected the insane of the colored population, have been justified by subsequent investigations; but, on the other hand, in correcting the error, the corresponding part of the seventh census (1850) seems hardly entitled to our entire confidence. We know that much sensibility was excited by the greater frequency of insanity among the colored race which resulted from that census, and it is possible that the interest thus felt may, in more ways than one, have biased the judgment of the census-takers in placing individuals under this class. Though the census of 1840 unquestionably overrated the number of the colored insane in the Northern States, yet when we saw the proportion gradually increase as we proceeded on the Atlantic coast from Georgia to Maine, and in the West from Louisiana to Michigan, it was not to be believed that the diversity was produced by a correspondent variety and gradation of errors; and, reasoning on probabilities, we were compelled to admit that there was some solid foundation for the difference exhibited, though it might be greatly exaggerated. We may add, that there is intrinsic evidence in favor of the census of 1840 on this point, which that of 1850 does not possess. Nor is this all. That census itself affords grounds for questioning its accuracy. It shows that while in the white population the proportion of the insane and idiotic is as much as 1 in 668, in the colored population it is only 1 in 1929; and though we cannot admit that, in New England, where the colored population shows a small increase, the number of insane and idiotic has fallen from 383 to 45 [55?], as the census shows; neither can we readily believe that, contrary to all previous enumerations, the proportion of the white race thus afflicted is three times as great as that of the colored. We must, then, look to future enumerations to decide whether the liability of the last-mentioned race to these mental maladies, which the census of 1840 has confessedly exaggerated in some States, has not been generally underrated by the census of 1850, and whether truth does not occupy a middle point between them." We cannot, therefore, decide whether insanity has increased generally, or whether the influence of race has been exhibited in either an increase or diminution of the tendency to mental alienation in the white or the colored portions of our population.

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\* *Progress of the United States in Population and Wealth in fifty years.* Appendix, p. 24. 1866.

From the Boston Medical and Surgical Journal.

### Fœtid Perspiration of the Feet.

MESSRS. EDITORS,—In No. 102 *L'Union Medicale*, a Mr. Gaffard proposes the following remedy for "fœtid sweating of the feet." Red oxide of lead, 1 part to 29 parts of the liquor of the subacetate of lead; the first to be bruised in a porcelain mortar, and the liquor gradually added. A few drops to be applied once a week, or oftener, in summer.

This was quoted in the January number of the *Medical News and Library*, without editorial comment. Possibly, therefore, there may be those who believe in the popular idea that the perspiration excreted on the feet is not inodorous. Professor Hebra, of Vienna, in his lectures on the anatomy and physiology of the skin, has spoken of this notion which is current in Germany. In connection with M. Gaffard's proposed remedy for an evil which certainly does not exist, it may be of interest to quote Prof. H.'s remarks, which I translate from the notes of his lectures published in the *Allgemeine Wiener Medizinische Zeitung*, for 1857.

Respectfully yours,

B. JOY JEFFRIES, M. D.

15 Chestnut St., May 2d, 1860.

Speaking of the secretion of the perspiration, he says:—

"There is no doubt that the sweat glands play an important part in the animal economy. Unfortunately, their physiological, and, still more, their pathological relations are but slightly understood. In general, we know that the secretion of sweat is very copious after hard work or continued bodily exertion, especially in the heat; and further, that it is under the influence of the nervous system.

"The sweat is colorless, salt to the taste, has a weak acid reaction, and a peculiar smell. It can scarcely be denied that every individual disseminates a peculiar specific odor. This is proved by dogs following their master's track, and finding him by the help of their greatly-developed organ of smell. Our organ of smell does not possess the necessary development to enable us to determine such differences. But there are individuals whose peculiar penetrating odor can be easily recognized by every one. It is a great mistake to attribute such a disagreeable smell to the *sweat alone*. We must rather ascribe it to the secretion of the sebaceous glands. We may be convinced of this by simply examining an individual, the excretions of whose skin have a bad odor. On the palm of the hand, where there are only *sweat glands*, we shall not find any unpleasant smell; it will, on the contrary, be strong on those parts of the body where the sebaceous glands are numerous—as the back, and more particularly in the arm-pits. It is moreover certain that the smell does not come immediately from the *fresh* secretion, but that it exists after this has decomposed. The fresh secretion has either none, or else a slight odor of rancid fat. But if the sweat remains for some time in contact with the skin, it undergoes a chemical change, and then the disagreeable smell will be perceived. We will enter more particularly into this subject when we speak of the 'fœtid foot-sweat,' which long ago was considered to be a *materia peccans* whose elimination from the body was desirable, and with whose healthy excretion no therapeutical interference was allowable."

"We now come to speak of a subject upon which similar erroneous views still exist. It is the so-called 'fœtid foot-sweat,' (bromidrosis.) We have already said that the sweat, when secreted, has no bad odor. Hence it comes that persons troubled with this 'fœtid foot-sweat' have no disagreeable odor

on the palms of their hands, no matter if the perspiration trickles from them. And when the feet are carefully and properly cleansed (together with the toes and nails,) they lose the highly-penetrating smell when they again begin to perspire. This so-called bromidrosis localis is found most frequently in young people who neglect proper cleanliness, and who possess no superfluity of covering for the feet, so that this is seldom changed. Hence, by the decomposition of the collected sweat, free fat acids are formed that have a disagreeable odor. These are absorbed by the pores of the leather, and one can easily convince himself, through his sense of smell, that the boots are the seat of the odor. Persons wearing a light covering for the feet and often changing it, will have little trouble from 'fetid foot-sweat.' Hence, this seldom occurs in the female sex, although the perspiration is more copious in women.

"As, from what has been said, it is evident that we have to deal rather with 'stinking boots' than 'fetid foot-sweat,' the absurd ideas which are in circulation as to the evil effects of suppressing, or too quickly checking the sweating of the feet, must be entirely given up. On other parts of the body also, where the secretion has an opportunity to remain some time in contact with the surface of the skin, *e. g.* in the arm-pits, on the scrotum, perineum, &c., a similar decomposition of the sweat takes place, and a very disagreeable odor is created. The treatment of this 'fetid sweating of the feet,' is therefore reduced to ordering greater attention to the cleanliness of the skin, and a more frequent changing of the covering of the feet."

OCCLUSION OF THE VAGINA AND ABSENCE OF UTERUS.—Dr. Warren said that two years since he had reported to this Society (Boston Society for Medical Improvement,) the case of a young woman who had been married two years, and who had difficulty during sexual congress. She was well developed, had pains in the loins every month, but had never menstruated. On examination, only a slight depression was found in the situation of the opening of the vagina. The urethra was displaced below its normal position, and dilated. Neither uterus nor ovaries could be detected by an examination *per rectum*. Another patient, 22 years old, unmarried, who had never menstruated, had lately applied to him. She had been examined by a female practitioner, who told her there was no vagina, which proved to be the case. By the rectum there was felt in the median line a small substance of the size of a bean, and a larger body on each side. At the age of 15, this patient had pain in the limbs, supposed to be premonitory to the catamenia; but there never had been any farther menstrual demonstration. So far as could be ascertained, the sexual feeling was present, and the woman was perfectly developed. In both these cases the ovaries must have existed, to give rise to the external development; in the second patient there was also the rudiment of a uterus.—*Boston Med. and Surgical Journal*.

COLORATION OF THE BONES OF THE FÆTUS BY THE MADDER GIVEN TO THE MOTHER MIXED WITH HER FOOD.—M. Flourens communicated to the Academy of Sciences, June 4th, 1860, the bones of a fœtus colored by madder given to the mother with her food during the last forty-five days of gestation. Not only were the bones of the fœtus, but even the teeth were reddened; thus showing that the blood of the mother communicates so freely with that of the fœtus that the coloring principle of the madder is conveyed with the blood from the mother to the fœtus.—*Moniteur des Sci. Med.*, June 11, 1860.



## On the Structure of Polypi of the Female Urethra.

[Read before the Biological Society of Paris, by Dr. A. VERNEUIL. Translated from the "*Gazette Medicale de Paris*," for the "*Boston Medical and Surgical Journal*.]

THE external orifice of the urethral canal in women is frequently the seat of a pediculated growth, which has for a long time, and in all the books, been designated by the name of polypus of the urethra. These tumors all resemble each other very exactly; they are generally of small size, and of a very deep red color; the enlarged portion projects beyond the meatus, while the pedicle, more or less elongated, is sometimes inserted into the circumference of this orifice, sometimes adheres a little more deeply to the interior of the canal, without, however, exceeding a few lines in this direction. These little growths sometimes bleed freely, but they are chiefly remarkable for the very acute pain with which they are accompanied, not only during micturition, and when they are touched, but also during coitus, which they sometimes render extremely painful. The whole vulva may become painful, and these symptoms, which correspond inadequately with the anatomical condition, explain why patients early seek advice, and demand the extirpation of the tumor, which is very easily performed.

M. Gosselin having recently removed one of these little growths, which was seated on the right side of the urethral orifice, I made an anatomical examination of it. The tumor is flattened transversely, of a very bright red color, and soft to the touch; after the section of the pedicle, which is very vascular, it became much more pale. After shrinking, it measured 6-100 of an inch in thickness by about 3-10 of an inch in its longest dimension. The surface at first sight appears smooth, but viewed with a lens, it is somewhat mammillated, especially on the edge which unites the two lateral faces. The pedicle, which is of the size of a small goose-quill, is composed of three or four enlargements or lobules, more or less separated from each other, which by their union make up its mass. Examined by a low magnifying power, the tumor is easily seen to be of a papillary nature; it is formed by an agglomeration of cylinders, crowded together, terminated by rounded extremities, and adherent by their bases, just as the fingers of the hand are to the metacarpal region. The papillæ, whose breadth is about the 1-100 part of an inch, have also secondarily lateral prolongations, which are much smaller. The external surface is covered with a tolerably thick layer of cylindrical epithelium, formed of little cells containing nuclei, and closely united together. These cells are placed perpendicularly to the surface of the papillæ, like the pile of velvet, giving a certain elegance to the specimen. The body of the papilla is traversed by a very large number of capillary vessels, whose loops, filled with blood, are the cause of the deep color of the tissue. These capillaries, interlacing in different directions, are large, with their walls, and here and there somewhat dilated. They approach the neighborhood of the surface, being only separated from the epithelial covering by a thin layer of the tissue of the papilla. This tissue, which is observed with difficulty on account of the vessels, presents a fibrous appearance, of slight density. The loose meshes of the tissue are filled with an abundance of liquid and of amorphous matter, which explains the shrinking of the tumor into a very small volume by drying. The circumstance that these tumors are the seat of very acute pain induced me to search with great care for nervous filaments, but I was not able to discover any.

In fine, the polypi of the urethra in women appear to me to belong anatomically to the class of papillary hypertrophies, and to that variety which is

so remarkably for the great development of the vessels. This opinion is confirmed by the pediculated form, so common in these alterations, in which they resemble the papillary vegetations which we often find in the external genital region of both sexes.

This fact completes the series of alterations of this kind, observed upon all the mucous membranes which are provided with papillæ. The polypi (an inappropriate name, derived merely from the external configuration,) of the urethra belong, then, to the class of warts, of condylomatous vegetations of the prepuce, the glans and of the margin of the anus, of certain pediculated tumors of the tongue, lips, nostrils, conjunctiva (palpebral granulations,) vagina, interior of the neck of the uterus, gums, &c.; in a word, of those papillary hypertrophies which are so common, so analagous, and whose history will soon require to be written.

From the study of this structure it is easy to account for the progress of the disease, its possible recurrence, the success which follows its extirpation either by incision or by the ligature, and for the necessity there is of cauterizing the point of implantation in certain cases. Here, as elsewhere, normal and pathological anatomy illustrate the problem of the nature, seat and evolution of the disease.

While speaking of the affections of the female urethra, I wish to notice a disease which I have not seen described by authors. I mean hypertrophy with thickening of the mucous membrane throughout the urethra, or at least in a great part of its extent. I have observed this disease in a lady of about thirty years of age, who had a large fibrous tumor of the uterus. In the region of the meatus urinarius was perceived a well-defined swelling, on the summit of which was the meatus. This projection, which was quite firm to the touch, was composed of the thickened walls of the urethra, the mucous membrane of which projected in a sort of hernia, somewhat comparable to a prolapsus of the rectum. The cavity was almost effaced by the enlarged folds of the mucous membrane, but was sufficiently dilated to admit the end of the little finger. The membrane was red, tolerably firm, and was thrown into convolutions, or thick folds, separated by deep sulci. This affection was not very painful, though it sometimes caused smarting during micturition. It commenced a great while ago, and increased very gradually. It had resisted various kinds of treatment, and I employed no especial means for its relief.

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**A NEW DANGER FROM CHLOROFORM.**—Mr. Syme has announced that *chloroform induces pyæmia*. The evidences of it, or his theory in coming to this startling conclusion have not yet been presented, but the *Medical Times* reports an operation of lithotomy by this distinguished surgeon, in which no anæsthetic was used. The patient was otherwise healthy, and it is said bore the operation, which was protracted and painful, with great courage.

Why, with his views, ether was not substituted, is not stated; nor can we determine whether Mr. Syme's opposition to chloroform is the result of an honest conviction, or merely the offspring of vicious feelings toward his great rival, the introducer of chloroform.—*Phila. Med. and Surg. Reporter*.

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**LIZARS.**—Mr. John Lizars, of Edinburgh, who was known throughout the medical world as an eminent surgeon and a philanthropist, died suddenly of apoplexy on the 21st of May. He was a pupil of Bell, and an associate of Liston.—*ib.*

From the London Lancet.

### The Last Hours of Albert Smith.

UNTIL nine years of age, Albert Smith was so delicate and of so fragile an appearance, that he was nicknamed by a friend "Little China." After this time, however, he became strong and so healthy, that to use a common expression—probably more true in his case than in many others to whom it has been applied—he knew not what a day's illness was until December last.

On the 22d of December, after giving his entertainment as usual at the Egyptian Hall, he returned home, and occupied himself till one o'clock in the morning by hanging pictures in a new room. He retired to rest without complaint of any kind. Early in the morning of the 23rd, he had a convulsive seizure while asleep, and from this he passed into a state of profound coma with stertorous breathing; rousing from this coma after nearly an hour's interval, he became violently excited in manner, but was unable to speak. The period of excitement lasted for about twenty minutes, and was followed by another fit, this by coma, and again by violent excitement. He was bled freely by his medical attendant, Dr. Ree, the back of the neck was blistered, sinapisms applied to the feet and legs; but the severity of the convulsions, coma, and excitement continued until two o'clock, P. M., the patient passing through a series of them, about eight in the hour. After taking Indian hemp, the convulsions ceased, the excitement diminished, but, with the exception of two or three words, the power of articulation was lost. There was no paralysis of either face or limbs; there was no albuminuria. Sleep followed in the evening, and about midday on the 24th the faculty of speech returned, and from this time there was rapid amendment. Within a few days his repeated expression was, "I never felt better in my life; I am only surprised that I have not lost strength."

On Friday, the 11th of May, Mr. Smith was exposed to wet, and suffered in the evening from "cold."

On the 12th, he was again more severely exposed, getting "wet through," and did not change his clothes for three hours: and on the evening of this day he coughed much, and felt weak. On the Sunday he rested; but on Monday resumed his duties at the Hall. He felt weak, wheezed in his breathing, could scarcely lie down at night, lost all appetite, but continued his avocations daily and nightly until Saturday afternoon, May 19th, and until that time had no medical advice. On Saturday he was seen by Dr. Ree, who found generally diffused bronchitis, with dulness on percussion at the base of the right lung posteriorly, and fine crepitation in the same locality. The pulse was labored, not more than 86 per minute. The obstruction to the respiration was great. The expectoration, very little of which was raised, was sanguinolent; the face pallid; the tongue extremely foul, and breath very offensive. Cupping-glasses were very freely applied to the back of the chest, and blisters were raised by strong acetum cantharidis; at the same time a mixture of squills, nitric ether, and anmonia was given every four or five hours.

Delirium supervened on the night of Saturday, but on Sunday there was slight relief to the respiration. The stomach now rejected everything, and continued to do so until Monday the 21st. On this day the patient resolved to get up and attempt his performance at the Egyptian Hall, and in the afternoon dressed himself for this purpose. He was persuaded to relinquish the idea, and was seen in consultation by Dr. Reynolds and Dr. Ree. The vomiting had now ceased, after taking a dose of a mixture containing a small

quantity of dilute hydrocyanic acid. The bronchitis was general throughout the whole of the thorax, on either side, and both above and below there was fine mucous and subcrepitant rhonchus. Expiration was extremely prolonged. In the left subclavicular region, where there was slight pain, friction sound was audible. The base of the right lung was dull on percussion, and except when a strong effort at respiration was made, was silent, no air appearing to find entrance. The pulse was labored, and only 80 per minute; the surface cool, the face pallid, the tongue very foul, and the bowels confined. There had been no sleep for several nights. Complained of prostration. From several causes, no examination of the urine could be obtained. The chest was enveloped in spongio-piline wrung out of hot water; and at night, calomel, colocynth, and opium were given; beef-tea, sherry, and Seltzer water were taken freely and *ad libitum*.

Tuesday, May 22d—Nine A. M.: Some sleep in the night, but much wandering; condition of chest much the same as at last report, but air appears to enter rather more freely; complains of great prostration, but says his breathing is easier; the pulse is slow and laborious; the surface dusky; no headache; no pain. Ammonia and decoction of bark, with tincture of squilla, were ordered to be taken every four hours; and brandy, beef-tea, and wine with beaten eggs, were given and taken freely.

In the afternoon, at six o'clock, he was seen by Dr. Burrows, Dr. Reynolds, and Dr. Ree. By this time the bowels had acted very freely; the chest condition was the same as in the morning, but there was less feeling of prostration, and the aspect was somewhat improved. Another blister was ordered to the right side, the mixture was to be continued, and calomel and opium to be given every six hours.

At eleven P. M., he was again seen by Dr. Ree, when he was about the same; and, in answer to a question, said, "I feel no pain whatever, and nothing else but extreme weakness." He was ordered to continue the use of medicine, the stimulants, and nourishment.

At five o'clock on the following morning, Dr. Ree was summoned in great haste, and found the patient much prostrated, bordering on collapse. Hot-water bottles had been applied to the feet and legs, and brandy with eggs and strong coffee were freely administered, under the influence of which the pulse got up, the surface became warm, and he was able to answer several questions. At this time (half-past seven,) although it was painfully evident the poor invalid could not last long, there was no sign of rapid dissolution, and Dr. Ree left, under a promise to return in an hour; but within that time an urgent messenger called him again to the house, too late, however, to see his patient alive; he had just breathed his last.

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ANDREAS RETZIUS.—The Stockholm *Aftonbladet* for April announces the decease of this great physiologist, Andreas Retzius, Professor of Anatomy and Physiology at the Royal Caroline Institute, expired on the 18th of April, after a few days' sickness, at the age of sixty-four. Sweden has lost in him one of its most honored men. The pupil of Florman and Abildgard, and, in subsequent years, the intimate friend of Johannes Muller, he combined all the merits of the elder school with all the prerogatives of the new. As an investigator, he had the good fortune of seeing all his numerous discoveries, included in the system of science, and as a teacher few equalled him in the fervent interest with which he watched over the progress of his pupils, and in the bold, clear, vivid originality of his instruction and diction. He was one of those great workers on the soil of science who had acquired European fame. His comprehensive intellect embraced all subjects, however varied,

that tended to the common good, and his assistance and co-operation were ever ready when the object was to force through all prejudices to make way for light and truth. Few amongst his contemporaries who lived and worked for the public good could be found who were not stimulated in their career of activity by the animatory contact with Andreas Retzius. In social life he was universally beloved. Warm in friendship, charitable in science, free from all selfishness and idle vanity, his memory will be long held amongst us in loving and grateful remembrance. Professor Andreas Retzius, was the son of Professor Retzius of Lund. He was born in 1796, became a student in 1812, and took his merit degree in 1819; afterwards became a teacher at the Veterinary Institution in Stockholm, and founded an anatomical museum there; undertook a scientific voyage to Norway, and later to Lapland, Germany, England, Ireland, and France; was appointed lecturer on anatomy at the Caroline Institution, and inspector in 1830. In 1826, he became a member of the Academy of Sciences. In 1832 he founded, in connection with other men of science, a medical gazette; and in 1839 was named professor of anatomy, in connection with painting, at the Royal Academy of Arts. As an author, he was very productive. The titles alone of his scientific works fill three closely printed pages in the "Biographical Dictionary."—*Id.*

**QUININE IN CROUP.**—By W. H. Baker, M. D., Texas, Ky.—On the 15th of April last, about 11 o'clock at night, I was called to visit a child suffering with croup. It was six miles to the residence of its parents, and I was told by the messenger that it was feared the child would die before I could reach it. He was still alive, however, upon our arrival, although apparently sinking very fast. Gave it ipecac, tartar emetic and hive syrup, but without producing emesis. I then placed the little patient in a tub of hot water, with the hope that it might produce relief, but to no purpose. The throat was then irritated with a feather, and cauterized with nitrate of silver, but still vomiting could not be induced. It was apparent to me that the child must die unless something was soon done for its relief, and having read in the *Journal* of the great efficacy of quinine in croup, I determined as a last resort to try it. I therefore administered a solution—one grain of quinine to a tablespoonful of water—a tablespoonful of which it swallowed with great difficulty. Its mother begged me to give it no more, as its suffering was so great. Its extremities were at this time quite cold. I however kept giving it the quinine, a tablespoonful every hour. A piece of flannel with turpentine was applied around its neck. After the third dose of the solution the patient broke out in a perspiration. This treatment was kept up for twenty-four hours, when it was administered every two hours for twenty-four hours longer, and then discontinued. The patient, who was about four years old, soon fully recovered.—*Nashville Journal of Med. and Surgery.*

**INSECTS INSENSIBLE TO PAIN.**—A work has just been issued on British insects, in which the author expresses the belief that insects do not feel pain. He states that when insects are mutilated in such a manner as would cause the death of vertebrate animals, they afterwards perform all the functions of life—eating, drinking, &c., with the evident power of enjoyment.—*Phila. Med. and Surg. Reporter.*

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## Communications.

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### Selections from Scanzoni's Obstetrics.

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*Translated for the "Pacific Medical and Surgical Journal."*

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BY F. MARQUARD, A. B.

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#### DELIVERY BY MEANS WHICH NECESSARILY INVOLVE INJURY TO THE BODY OF THE CHILD.

1. *Perforation.*—By perforation is understood that obstetrical operation by which the cavity of the child's cranium is opened with instruments invented for the purpose, and emptied of its contents, with the design to diminish the volume of the head, and thus effect its passage through the absolutely or relatively narrow pelvis.

With the few and insufficient means which the physicians of olden times had at their command to assist difficult labor, with their complete ignorance of the forceps, which only came into use in the eighteenth century, it is not to be wondered at that we find in the oldest writings of the Greek and Roman physicians precise declarations that they, in certain cases, delivered by opening into the child's cranium. The works of Hippocrates and Celsus remove all doubts that the operation was not recommended by either of these two physicians until after the death of the child. This method having once been made known, it could not fail to be followed by the later accoucheurs; but, unfortunately, in a manner that cannot be approved, even though due allowance be made for the little cultivation of this branch. It cannot be denied that after the time of Celsus, operative obstetrics made the most deplorable retrocession, and soon the Arabian physicians reduced the art to a most bloody and murderous manipulation. It was not until the time of Pare, De la Motte, and others, that turning was considered a preferable means for the extraction of the child in those cases in which delivery could not be effected without the use of destructive instruments. Not until then commenced a better, less bloody era of obstetrics. Nevertheless, perforation was comparatively quite frequent, which is not to be wondered at, considering that turning is not always possible; that at times, disproportions of the head and pelvis might offer difficulties which we can now overcome by the use of the forceps, without necessarily causing the death of the child, but which in those days could only be removed by diminishing the size of the head. It was, therefore, this instrument, namely, the forceps, which exercised the most undoubted beneficial influence for the restriction of the operation of which we are now speaking.

We have already alluded to the above in the few historical notes which we have given as a preface to extraction by the forceps, and it only remains to say that it was again Germany which in course of time brought into notice the most correct ideas as to the importance, indications and technical execu-

tion of this operation; and that, on the contrary, the English obstetricians, with the exception of a very few, are in a position but little different from that occupied by the physicians who lived before the invention of the forceps. A proof of this is the statements of McClintock and Hardy, according to which, of 6702 births in the lying-in hospital in Dublin, (1842-1845,) perforation was resorted to 63 times, that is once in 106 births.

Not less easily is Collins induced to this operation, when he performs it in 16,654 births 120 times; that is once in every 138. There could be many more instances in English practice enumerated, which would be astonishing to a German accoucheur.\*

*Enumeration of Perforating Instruments, and description of the one used by us.*—The numerous instruments recommended for performing the operation may be collected into the following principal groups:—

1. Knife-shaped perforator.
  - a. Without covering. b. With covering.
2. Gimlet and screw-shaped.
3. Needle-shaped.
4. Scissor-shaped.
  - a. Outward cutting and without covering. b. With covering.
  - a. Inward cutting and without covering. b. With covering.
5. Trephine-shaped.
  - a. With gimlet. b. Without gimlet.

Under these principal groups, the many (nearly 80) instruments may be placed, which from Hippocrates to the most recent date have been published. Not to weary the readers of this book with the enumeration of the numerous names of their inventors, we refer them to Kilian's *Operative Obstetrics*, as entirely exhausting the subject, and his plates, until yet unsurpassed.

We think to answer our purpose in giving one of the most commonly used instruments, namely, the scissor-shaped instrument of Levret, and also Leissnig's trephine, used by us and modified by Kiwisch, without intending to give cause to the belief that the operation could not be performed just as successfully with many of the other instruments known to us.

But if we were called on to give our opinion as to which of the above named principal groups we prefer, we should decide in favor of the trephine-shaped instrument, which is now used by the majority of the German accoucheurs.

While the knife, needle, and gimlet-shaped instruments, in modern days, have been put aside, because the opening made by them into the cranium is too small to permit (without the aid of other instruments) the extraction of the brain, and thus to effect a sufficient decrease of the head, the scissor and trephine-shaped perforator have been in use for the last ten years.

The former deserve to be considered inferior to the latter because more likely to cause injury to the soft parts of the mother by gliding off, which cannot always be prevented, and because they can only be easily inserted by an entirely firmly resting head, and even then only through a fontanelle or suture; further, because they make only a split-like opening, which nearly always requires for enlargement the removal of several pieces of bone, so that the operation by the use of these instruments is far more complicated, dangerous and protracted, than with the use of the trephine, which, if it possesses a screw-shaped gimlet, can be inserted into the moving head, in whose cavity it is to penetrate, without any difficulty, in the short space of from a half to one minute, and make a relatively large opening without projecting pieces of bone, and never endangers the soft parts of the mother, if carefully used. For this reason we have decided on the use of an instrument belong-

[\* The difference of the frequency of the operation between the British, French and German practitioners is given in Churchill's *Midwifery*, Philadelphia, 1858, p. 340.—Tr.]

ing to this group; formerly, we used the Iorg's trephine, but, convinced of the superiority of Leissnig's perforator, we now use this. It consists, as Kiwisch described it, simplified by himself in his Contributions to Midwifery, of a brass tube 10 1-2 inches long and 10 lines in diameter, and of a trephine-crown with a long handle concealed inside. The tube is composed of two parts, the upper about 8 inches, the lower 2 1-2 inches long.

The way the two parts are connected is, that the upper margin of the lower half is ground off about three lines, so as to be inserted into the upper half.

To effect a more thorough union, there is on the upper part a vertical aperture, which turns at the upper end at a right angle, and is about two lines wide, parallel with the margin of the tube. In this aperture, which is covered on the lower part of the tube by a bow, fits a steel button in the lower part of the tube, which by the insertion and corresponding turning of the two parts of the tube, comes to rest in the transverse branch of the aperture, and thus firmly unites the instrument.

The upper part of the tube is uniformly hollow, and only the upper margin from within slightly turned, and externally carefully smoothed. The upper and lower end of the lower part is closed, and only in the centre perforated for the insertion of the crown staff. The closure is effected by two moderately strong female screws, designed for the reception of the screws on the crown staff. The second part of the instrument consists of the crown, pyramid, and staff. On the crown, instead of the commonly used saw-shaped teeth, are small, knife-like *flutes*. The bottom of the crown is perforated, and has externally a somewhat projecting margin to prevent the knife-like teeth of the crown from rubbing against the tube and from slipping through.

The pyramid is screw-shaped, can be raised from the bottom of the crown and fixed at a suitable height. For this last purpose the crown staff is hollow and provided with holes on the side, covered by a slide through which a screw can penetrate to the staff of the pyramid. By turning the screw entirely back the pyramid can be removed from the crown. The crown staff is provided with screws fitting in the above mentioned screw threads. On the lower part of the staff is a handle of horn.

This instrument combines all advantages generally praised in trepan-shaped perforators, and is at the same time simpler than many similar instruments, and deserves therefore the full recommendation given by Kiwisch.

*Other instruments necessary.*—The circumstance that the perforation of the child's head alone is many times not sufficient to permit the extraction of the child, but that we are, on the contrary, many times compelled to open the perforated head still more, made it easy to explain that in the course of centuries various instruments were invented which should serve for the realization of the last named purpose, and which really have served, hitherto.

[Mr. Scanzoni here names and describes several instruments now obsolete.—Tr.]

We can at present the more easily dispense with these instruments, as we have in the kephalotribe an instrument which takes hold of the perforated head very surely, diminishes its volume by compression, without causing any of those projecting splinters of bone, which so easily injure the soft parts, an accident nearly inevitable by the use of several of the above named instruments, not considering the quickness with which the head can be extracted when once taken hold of by the kephalotribe; an advantage which surely everybody will acknowledge who has found himself but once in the unpleasant situation of being under the necessity of extracting a perforated head by means of pointed hooks, forceps, etc.



It will not be too much if we say that all those instruments of olden times are now unnecessary, but, on the contrary, if we advise never to perform a perforation without having a kephalotribe in readiness for extraction. This instrument is, as we shall hereafter prove, indispensable to the practical accoucheur, and in its possession we undertake, convinced of its excellent qualities, with far more self-confidence, the task of finishing a difficult delivery, than would be the case if under the dread of finding ourselves in the moment of danger compelled to use the uncertain and dangerous instruments which had, before the invention of the kephalotribe, necessarily been used for the extraction of a perforated child's head.

If it should be answered us that the forceps could be substituted for this instrument, we have only to reply, that the perforated skull emptied of the greater part of the brain, offers no firm hold for the forceps, because this has a relatively large curve for the head, and thus glides off by the slightest opposition, and therefore cannot be recommended for the extraction of the perforated head.

*Appreciation.*—To form a correct idea of the results obtained by perforation, of the advantages and disadvantages peculiar to it, it is necessary that not only the consequences to the mother be considered, (as the child is out of the question,) but also that the effects be taken into view of other operations recommended from various sources in cases where perforation is indicated. Amongst those operations, we have to consider extraction of the child with forceps, kephalotripsy, symphyseotomy, Cæsarian section, and, in certain cases, instrumental abortion.

(To be continued.)

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### Complications of Scarlatina.

BY H. H. TOLAND, M. D.

IRRITATION and inflammation of the gastro-intestinal mucous membrane are very frequent complications of malignant scarlatina, and may either precede and prevent or succeed the eruption. In violent forms of the disease, particularly in young children, vomiting is often the first symptom observed, which is sometimes followed by cholera infantum of so violent a character as to terminate fatally before the eruption appears. In such cases the throat is generally inflamed and the tonsils ulcerated, although the anginous affection is seldom prominent or troublesome. Should these symptoms be controlled and reaction occur, the eruption will appear and the disease may progress as if no complication had existed, until the morbid secretions from the throat and nares pass into the stomach and intestinal canal in sufficient quantity to produce either irritation or inflammation of the investing mucous membrane, indicated by vomiting and either diarrhoea or dysentery, with excoriation of the integument in the vicinity of the anus. Diarrhoea, when moderate and unaccompanied with vomiting and other symptoms of great constitutional disturbance, is frequently salutary, and should not be arrested; but when gastric derangement exists, and the alvine discharges are frequent, dark, offensive, mucous, or bloody and abundant, great and frequently fatal prostration speedily results.

*Case 1.*—P. E——, a female aged eleven months, in good health, was attacked November 3d, 1859, with vomiting and purging, which, as the child was teething, might have been mistaken for an ordinary case of cholera infantum, if she had not occupied the same room with a child affected with scarlatina. I found her, twenty-four hours after the vomiting commenced, with a small and rapid pulse, cold extremities, and difficult breathing. Every thing that was taken into the stomach was speedily rejected, and the dejections were abundant, thin, dark and offensive. Warm applications were made to the extremities, and mustard applied to the abdomen, followed by warm vinegar as before directed. Sub-mur. hyd. and pul. rad. zingiber, aa, gr. 1-2, were given every hour, in combination with the most powerful stimulants, with the hope of arresting the disease and producing reaction, without which the eruption could not possibly appear. No permanent improvement resulted from these remedies, and the patient died in forty-eight hours after being subjected to treatment.

*Case 2.*—J. K——, aged four years, complained October 11th, 1859, in the morning, and by evening was vomiting and purging. His pulse was small and frequent, extremities cold, with increased heat of the head and intense thirst. He was bathed in warm water rendered irritating by mustard; counter-irritants were applied to the abdomen, and sub-mur. hyd. and pul. rad. zingiber, gr. 1-2, were administered every hour until the vomiting and purging subsided, and reaction was fully established. The eruption appeared on the third day, accompanied with violent fever and all the symptoms of the inflammatory variety of scarlatina, which yielded to the treatment usually adopted where no complication exists.

*Case 3.*—S. K——, a female aged eight years, complained of sore throat, October 4th, 1859, and on the morning of the 5th the eruption appeared, accompanied with violent fever, excessive irritation of the skin, and great thirst. Mutton suet was applied freely to allay the cutaneous irritation, which I have found more convenient and efficacious than any other local remedy; and the alkaline and diuretic mixture previously given was administered. Nothing unusual occurred until the morning of the 8th, when, although the eruption was still apparent, her pulse was small and 140 per minute. She vomited incessantly, had frequent operations of a mucous and bloody character, was delirious and somewhat comatose. The circulation was equalized by the application of bottles filled with warm water to the extremities, counter-irritants to the abdomen, and the disease arrested by the administration of opium, gr. 1-8, and sub-mur. hyd., gr. 1-2, every two hours. They were continued about twelve hours, and then abandoned. Subsequently, nothing was given, except mild diuretics and Dover's powder, to procure sleep. Although the convalescence was tedious, in consequence of the derangement of the digestive organs, and the excessive prostration produced by the serious complication from which she suffered, she is now in good health, having escaped dropsy, by which her brother was affected, who had the same difficulty before the eruption appeared by which she was attacked during its continuance.

Before the eruption disappears, and as early as the sixth day from the first evidence of indisposition, the cellular substance sometimes inflames, becomes painful, and very soon swells sufficiently to produce considerable enlargement of the extremities. The entire surface of the body in such cases is so excessively sensitive to the touch that it is difficult for the nurse to render them the necessary attention without inflicting great pain. More frequently it assumes the form of articular rheumatism, and may or may not be accompanied with effusion into the joints. This may appear either as a complication or sequela, which I think is most frequent. Of all the complications of scarlatina this is the most distressing; although, judging from my

experience, not the most dangerous, if energetically and properly treated. It is not confined to infancy, having observed it from the age of two to twelve years. The first case of disease of the cellular tissue as a complication which occurred, I supposed to be accidental, as I had neither observed it myself nor had any evidence that it had been seen by others. In the three cases treated it was developed about the time the eruption began to disappear, was accompanied with violent fever, great thirst, and entire inability or a great disinclination to use the extremities, for ten or fifteen days; and in neither case was the patient able to walk until between the twentieth and twenty-sixth days, which might have resulted from the soreness remaining in the feet longer than in other portions of the body. They were all female children, with dark hair, blue eyes, and fair complexion, and both the younger children had suffered from scrofulous ophthalmia and enlargement of the cervical glands, which disappeared during the treatment and have not returned.

Four cases of articular rheumatism were treated. They appeared about the same time as the other difficulty, and varied but little in their duration. In one, a boy twelve years old, being entirely relieved, had a return of rheumatism six weeks after recovering from scarlatina, which succeeded an attack of pneumonia caused by taking violent exercise at school before his strength was perfectly restored. The general treatment was the same that, I have long adopted in ordinary cases of acute rheumatism, and in every instance I was perfectly satisfied with the result, with the exception that stimulants were given, particularly California port wine, after the inflammatory stage subsided, and a nutritious diet recommended when the stomach was capable of performing its function. Iodide of potassium, tinct. aconite rad., ext. actea racemosa, and vin. colchici sem., were the remedies found most efficacious. The iodide of pot. was substituted for the nitrate, because I believe it to be more useful than the latter in ordinary cases of rheumatic inflammation. The tinct. aconite rad. was expected to allay pain and control fever; besides, it is one of the most useful remedies known to the profession, except the ext. of actea racemosa, which exerts a more decided influence over every variety of rheumatic inflammation than any remedy I have ever administered, and will often disappoint even those who entertain the most favorable opinion of its efficacy. In the enumeration of the remedies for the treatment of these complications, opium should not be omitted, it being in many cases the only means by which sleep can be obtained, and without which all other remedies would be unavailing.

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### Erysipelas of the Face and Head in a Patient aged 70. Cure.

BY D. WOOSTER, M.D.

MRS. —, æt. 70, of strong constitution, who has never been sick to an alarming degree, rode out one very warm day (Monday,) and returned late, when the air had become quite cool. She felt a little chilly after returning. The next morning, about 2 A. M., she felt a burning tingling sensation in a small spot on the left side of the neck. Almost simultaneously she had shivering, followed by feverish sensations. The spot where the burning was

felt, was observed almost immediately to be red and radiating, especially in the direction of the left cheek and temple. The swelling and redness extended and increased till Wednesday evening, when we first saw the case.

The left half of the head, as far back as the ear, is red, puffed up and œdematous; the left eyelids look like red bladders filled with a very thin liquid. The red blush extends to the top of the nose, and has just begun to cross the middle line towards the right half of the head. The tongue is covered with a white and slightly curdy looking coat. The hearing, already somewhat impaired by age, is now much worse than usual; the eyes are reddened; pulse 90. There has been no delirium and not much fever from the first, as I learn from the attendants.

*Diagnosis.*—Erysipelas, mild form.

Order cloths wet in Velpeau's solution of the sulphate of iron, to be applied and repeated as often as they get dry. Diet, lean red meats and stale bread. Drink, California white wine and water.

*Thursday evening*—Affection has crossed over to the right side. Madam thinks she is much worse, and is low spirited; has severe darting pains in the sides of the head. Order a seidlitz powder. Local application and diet the same.

*Friday*—Worse as to the swelling of the head and face, and, in fact, she is weaker than yesterday. Wine increased in quantity; diet of meat limited only by appetite. No vegetable food allowed, except bread, from the commencement. Effervescing draught every two hours. The eyes are scarcely visible beneath the puffed eyelids.

*Saturday; morning*—30 grains of quinine, in acid solution, to be taken during the next forty-eight hours. A Dover's powder, 5 grains, to be taken at pleasure, to quiet the darting pains in the head; swelling of left side much diminished. Attempted, experimentally, yesterday, to limit the progress of the affection by a zone of cauterization with nitrate of silver. The result, as might be expected, a black mark only, and the reddening process not arrested. Strange so absurd a notion is still entertained by any sensible physician as that cauterization of the cuticle, or even of the true skin, will arrest the advance of the phlegmon! If it ever fails to cross the enchanted line, it will not be because of the black mark, but because of the silent curative agency of nature, which is ever tugging at the skirts of advancing disease; and which nine times in ten, if the disease is not helped on by officiousness, will finally arrest the malady in time to save life.

*Tuesday, ninth day of disease*—The whole appearance of patient is much improved. For the last forty-eight hours, flour has been substituted as a local application in place of the solution of sulphate of iron, and has alleviated the local heat and pain quite as much, and perhaps more, than the iron. Still, Velpeau believes the solution is really antagonistic to the disease, and after having employed it in many cases exclusively of all other local applications, we believe, independently of our almost implicit reliance on the mere dictum of the learned and venerable Frenchman, that he is quite right.

*Saturday, thirteenth day of disease*—Madam may be called well. There is still a small œdematous spot over the right eye, and the crusts which formed on the cheeks when the cuticle broke for the escape of serosity, have not yet fallen; but Madam eats and sleeps well, and possesses within a trifle, her former vigor.

*Commentary.*—This was a mild case of erysipelas, but it occurred in a person who had already reached the natural term of life, when any disturbance of the system is dangerous. With the most confiding reliance on the intelligence of nature to defend her own well-beloved children, it was our

design, as it ever is, merely to put within her reach the assistance she actually asked for, with a silent voice, yet with one so intelligible in its mute signs, that it is easy to be understood by him who attentively observes.

M. Louis, of Paris, was no doubt right when he said to Dr. Bennett, of Edinburgh, "Erysipelas of the head is never fatal."

Let it be noted this patient had meat, wine and bark from the beginning, and yet was of full habit, a generous liver, and of vigorous constitution; and still recovered from an inflammatory disease in the very short period of thirteen days, without antimony, without calomel, without digitalis, without losing blood, without being purged, without any part of the usual antiphlogistic treatment.

## Editor's Table.

**COAGULATION OF THE BLOOD IN THE VEINS DURING LIFE.**—Some cases of this affection have been recently published in the journals. We have to add Mrs. M—, primipara, miscarried, June 20th, of a fetus at six months. The labor was prolonged 24 hours. The presentation was left scapula: turning was effected under chloroform. Fœtus had evidently been some time dead, the skin being softened in many places by the progress of decomposition. The vulva and vagina of the woman were extremely sensitive and much inflamed. She complained of pain in the right leg and thigh; especially of a sensation of soreness and stiffness along the inner side of the right lower extremity, much increased by locomotion. Said she had suffered with this limb three or four days. No pain in the calf of the leg, but some swelling below the knee. On examining the limb, we found an irregular elongated livid tumor, about twice the size of a peanut, just behind the inner condyle of the thigh bone. It was hard to the touch, except a very small vesicle in its centre, which presented fluctuation. We punctured this point, and there flowed out, without impulsion as from an abscess by phlegmon, perhaps a teaspoonful of venous blood which did not coagulate: the firm tumor or clot still remained. The saphena below the knee was larger and more distended on the affected right limb than on the other. Pressure with the fingers on the saphena on the heart-side of the tumor did not increase the engorgement of the same vein below the tumor.

We diagnosed the tumor to be a clot completely plugging the internal saphena at the point mentioned.

There was considerable inflammatory tenderness about the organs of generation, and pain, especially in the location of the right ovary, which, on pressure, propagated pain as low as just beneath Poupart's ligament, but no farther. The treatment was application of tinct. iodine to the tumor and to the skin over the course of the saphena, a short distance above and below: hot poultice to the whole popliteal region. For the rigors and fever which occurred the day after accouchment we gave 30 grains of sulph. quinine in as many hours. Iodide of potassium, 10 grains daily, was continued, in a savory medium, for eight days; at the end of which time the obstruction of the vein had disappeared. More or less pain was felt in the affected extremity for three weeks later: this was treated with and finally vanished under the use of morphia at night, and fluid extract of valerian during the day. Warm baths, and stimulating embrocations on the limb, were not neglected.

**POSITIVE KNOWLEDGE—ADDITIONS TO.**—In the eighteenth number of this Journal appears the following item, translated from the proceedings of the Academy of Sciences, by my former associate, Dr. Trask. We republish this for the sake of exhibiting at one view the progressive results of the very elaborate researches of M. Jacobowitsch :

\* \* \* “The first is the late labors of M. N. Jacobowitsch, entitled *On the Intimate Structure and Functions of the Brain and Spinal Cord of Man and other Vertebrata.*

“To this work the Academy accord the first Montyon Prize.

“This work in importance to histology, physiology, and comparative anatomy, holds the first place. The author has distinguished and demonstrated that the nervous system is constituted essentially of three orders of elements :

“1st. The stellate cellules, (the largest) ; these are the source of all movement.

“2d. The fusiform cellules, (the smallest) ; these are the source of sensibility.

“3d. The oval or round cellules ; these belong to the ganglionic system.

“The conclusions at which the author has arrived, are, that the different elementary and physiological properties of the nervous system of man, are located in these histological elements, (cellules) which are as distinctly characterized as their form and volume.

“The Commission express the most lively interest in the demonstrations of the author under the eye of the Academy, and the preparations elucidating these experiments. A more arduous task than the work submitted, is in store for the author, he proposes to the Academy the separation (*debrouiller*) of the texture of these elements, with a view of determining the special physiological function of each. He is to determine the precise disposition of these histological elements of the spinal cord and brain, and indicate in each of these the centres of the cellules or fibres of the groups, accumulated, mixed, or separate.”

It will be seen that the following is the accomplishment of the promise made above.

*Hystologic Anatomy.*—Terminations of nerves on the periphery and in the different organs, or peripheric terminations of the nervous system in general, by N. Jacobowitsch.—(*Gaz. Hebdom.*, June 1st, 1860. Acad. Sci. 7th May, '60.) The author sums up this work as follows :

I. Each nerve, of whatever nature it is, originates from a nervous cellule in the central organs of the nervous system, and terminates in the periphery or in the interior of an organ.

a. Either in a nervous cellule and for the nerves of sense in the focus itself [*of the cellule.*—ED.] ;

b. Or in the mass of a cellule, in the interior of the organs for the ganglionic nerves ; or, finally,

c. In forming a capillary nervous network, when the anatomical differences disappear, the axis cylinders passing into each other and becoming confounded together.

II. The nervous system, central as well as peripheral, forms a whole which, like the sanguineous system, is found throughout the organism, penetrating with its sheaths through the different parts, and arriving thus even to the final elements, without, notwithstanding these almost endless ramifications, becoming lost in a vague and confused manner.

III. The nervous elements, nervous cellules as well as axis cylinders, are always in process of development, as well in the central organs as at the periphery.

IV. The part which the nervous cellules play, which are found at the periphery or in the interior organs, varies; they either preside over special functions, like those of all of the organs of the senses; or they serve for the just preservation of the organs themselves, as the nervous cellules of the glandular organs and of the mucous membranes; while the physiological function, (properly so called) of the organs depends upon the connection of these nervous cellules with the central parts of the nervous system.

V. If the anatomical difference disappears in the peripheral capillary nervous network from the fact that the axis cylinders are confounded together, it is not the same with the physiological difference which always exists, (the same as we see in the capillary blood vessels) and it is probable that its activity may be carried along (*traduise*) by determinate directions of the courant of nervous force with the substance of the nerve (*avec la matiere*).

CLINIC LECTURE ON UREMIA.—Nervous Accidents of Uremia, their causes, mode of production and their differential diagnosis. Case of hydromphrosis and tonic convulsions, followed by death in an infant.—M. Aran, at Hotel Dieu. Reported by Dr. Sireday.—(*Gazette des Hopitaux*, June 14th.) [Translation.]

I have had occasion *apropos* of many patients in our wards, to speak of albuminuria, of its principal manifestations and of its most frequent complications. I have not had time to undertake the study of the symptoms so interesting which pertain to the nervous system; moreover, I had no patient in my wards which could serve as the subject of a lesson of this character. Chance has favored us; the very day on which I was to commence the history of albuminuria, I had an opportunity, in the city, to make an autopsy of an infant that had died of *uremia*. As you could not be witnesses to the extraordinary symptoms which my little patient presented, allow me, in the first place, to narrate them to you in few words; you will afterwards see the anatomical preparations which I was able to preserve, and which, I hope, will be of the greatest interest to you.

May 24th, at three o'clock in the morning, I was called to see a child only eight days old. The mother, who had already had three easy confinements, had suffered no accident during her last pregnancy; she had never had swelling of the face or extremities, or severe headache, or disturbance of eyesight, or nervous attacks. She was confined this fourth time without trouble or mishap, of a child in full life, well formed, and apparently in perfect health. It took the breast well, had no dropsy, urinated well, and had never had the least convulsion, until the seventh day, towards evening, when the mother saw the babe working its jaws, and perceived that the latter were rather firmly set together, and that it had become entirely impossible for the babe to take the breast. These symptoms continued during the night, and were verified at my visit in the morning. A few hours later the little one was suddenly taken with convulsions. The face is violet-livid; the respiration plaintive and sighing; the look fixed, the eyelids motionless, and the lower jaw so shut against the upper that it is impossible to open the mouth. In a word, there is perfectly characterized trismus. The whole body and limbs are the seat of an invincible tetanic rigidity. The infant, lying in bed, reposes only on the back of the head and the heels; the body is curved forwards, and under the influence of the contractions of the spinal muscles, describes an arc of a circle.

At the same time the arms forcibly extended by the sides, turned in forced pronation, are agitated with slight, scarcely perceptible shocks; the little fists are clenched, the thumb of each shut on to the palm of the hand and forcibly compressed with the other fingers shutting over it. The legs are extended like the arms. There is occasional vomiting.

A few moments later, these tonic contractions cease, the eyes and eyelids move a little, the trismus diminishes; respiration becoming more regular, the face loses its bluish hue. A rapid amelioration succeeds this crisis; the little patient is induced to drink, and then falls asleep. But soon a new attack of tonic convulsions like the preceding comes on, and is followed afterwards like the first, with a marked remission. Now the attacks succeed each other at intervals constantly shorter, until they become almost continual, and in a short time are followed by death. The child died thirty-six hours after the commencement of the symptoms.

This rapid invasion of the disease in the midst of circumstances which seemed entirely favorable to the life and health of the infant, the singular form of the convulsions, exclusively tonic, and the termination so speedily fatal, had caused some doubt in my mind as to the nature of the disease with which this babe had died. Therefore, with the greatest alacrity I accepted the proposition of the father, a man of the highest intelligence, that I should make an autopsy.

The aspect of the body is bluish, especially at the extremities of the limbs and the dependent portions of the body. All the limbs are rigid, and the arms, in forced pronation, extended along the body. The fists are still clenched, with the thumbs in the palms of the hands, and concealed by the fingers energetically clenched over them.

The spinal venous plexus is greatly congested, also the bones of the cranium, and particularly the parietal portions. There is no effusion, either watery or bloody, in the great cavity of the spinal and cranial arachnoid; no increase of cephalo-spinal fluid. Slight congestion of the pia mater; no appreciable alteration in the pulp of the brain nor of the spinal marrow. There is nothing unusual in the cavities of the brain. The larynx, wind-pipe and its hollow branches, present no alteration; only the lungs are congested, and in certain points, particularly under the pleura, there are some *livid spots*, or small apoplectic centres, which, from their brown color and granular aspect, trespass upon the rosy color of the rest of the organ.

The liver and spleen, proportionally very voluminous, show only a uniform congestion. Absolutely nothing at fault in the intestinal tube. It is in a perfectly natural condition in all its portions. Now we have examined nearly all the organs, and have as yet found no key, no explanation of the problem we proposed to resolve by the autopsy. But here follow lesions more interesting. We are about to solve the difficulty.

The bladder attracted my attention by its large size, which equalled that of a hen's egg. It was greatly distended with urine, and rose up as high as the navel. I tried, by forcible pressure, to make the urine pass by the urethra, but could not succeed. For a moment I thought there had been retention of urine, perhaps from an imperforate urethra. Nevertheless, the information already possessed, and that which I had learned immediately of the members of the family who had charge of the infant, was such that I could not doubt micturition had taken place.

I regret very much that I was not able to complete my examination touching the external urinary organs; all that I can tell you in addition is, that there was a constriction of the prepuce, through which I could not pass an ordinary catheter into the meatus urinarius.

Another peculiarity which I must not forget, was the great size of the ureters, which ascended on each side behind the bladder towards the kidneys, and appeared through the peritonæum like two long tubes, the size of a large pencil, and were still more enlarged and funnel-shaped at the portion corresponding with the renal pelvis. This disposition was much more marked on the left side, and principally on a level with the tubes of the kidney, where the pelvis, of the size of a large almond, was distended with liquid.



A puncture was made in the bladder, and the urine which escaped was received, without admixture with blood or any other liquid, into a tube for experiment. It was a little troubled, of a citron-white slightly yellowish color. Heated, it precipitated abundant clotted cheesy floculi, which fell to the bottom of the tube, and were not re-dissolved on the addition of acetic acid. There remained then no doubt that the urine was albuminous.

Let us examine the increased size attained by both kidneys; the right measured not less than four and three-quarter centimeters, (a little less than two inches) and the left nearly six centimeters vertically. The breadth and thickness of them were proportionally increased. If now we divide the organs, through their convex margins, each into two symmetrical portions, what shall we find?

On the right side, enormous hypertrophy of the cortical substance; the latter is remarkable for its yellowish color, as if infiltrated with fat, which trespasses upon the rosy color of the pyramids. No one will hesitate, in my opinion, to pronounce this Bright's disease corresponding to the third or fourth stage of M. Rayer. But here is another fact not less important: the tubes of Bellini, near their entrance into the calices, appear injected with a thick concrete matter.

Examination with the microscope determined that this matter was crystals of the urate of soda.

Let us pass to the examination of the left kidney. Notwithstanding its increased volume its parenchyma is destroyed, the gland is converted into numerous small cysts, which resulted solely from the excessive development of the calices. Without any doubt, under the effect of interior pressure the mucous membrane of the calices, pressed against the substance of the kidney, has compressed it, strangled it by degrees, and nearing the periphery of the organ, has finally obliterated its parenchyma in an insensible manner.

In truth, you perceive the membrane which lines each of these little cystic anfractuosités, is very obviously continuous with the mucous membrane of the pelvis. The proper substance, secreting of the urine no longer exists in this organ; it has become unfit for the secretory function, which it performs in the normal state.

Here and there a few tubes of Bellini filled with urate of soda.

Now if we bear in mind the symptoms just narrated, in view of these lesions of the kidneys, and the condition of the urine, is it not readily conceded that my little patient fell a victim to the violent disturbance of the nervous system it presented, which has been described in these latter days under the name of *uremic convulsions*, poisoning by uremia?

These symptoms pertaining to the nervous system, which are found in patients affected with diseases of the kidneys, were noticed by the first physicians that studied the affections. Bright and Christison, and, before them, Wells and Blackhall, had already shown that in this affection of the kidney, improperly described under the name of albuminuria, the patients were subject to convulsions, coma and stupor. Since, this frequent coincidence has been better studied, and we already have the works of Addison, Simpson, Blot, Professor Braun (of Vienna), Imbert-Gourbeyre, Landouzy, and still more recently of Cl. Bernard, Woehler, and Frerichs.

It remains to tell how these pathological manifestations, sometimes so different from each other, have excited the attention of physicians, and how different theories have been created to explain the cause and connection of the various phenomena.

Uremic poisoning (I am going to show in a moment that this is the true term) manifests its action upon the organism in two different manners: sometimes in an acute and rapid manner, and again in a slow or chronic manner.

In the chronic form, the symptoms are but little marked. The patient complains of uneasiness, agitation, of a somewhat marked oppression or resignation, and above all, of headache more or less severe, which may vary from simple heaviness and a feeling of pressure, to the most agonizing, boring pain, which, however, in this case is always very limited, and often occupies only one frontal eminence, for example. At the same time the memory becomes enfeebled, and the mind manifests the greatest inaptitude to intellectual labors; answers no longer correspond to the questions; the ideas become incoherent; sleep is heavy, and not at all restorative; the patient is habitually in a state of somnolence, from which he can only be aroused only by shaking or tickling the feet, or the like. At the same time with these symptoms, the face is bloated, the eyes staring, the features motionless; the sight becomes confused; the hearing less distinct, touch less delicate; the appetite fails, and the patient is tormented by frequent vomiting and copious diarrhœa, which seems every time to alleviate somewhat his condition. The pulse is hard, tense and diminished in frequency.

Such are the symptoms in a case, sometimes during a considerable period, many months, for example, without our knowing many times to what to refer them. They may disappear with the cause which produced them, as in the congestion or nephritic inflammation of pregnancy; but frequently it is only the prelude of more serious symptoms, which indicate then what we call the acute form of this disease.

In this acute or rapid form, most commonly consecutive to the former, but appearing sometimes at the beginning, the symptoms are manifested in four different modes, which we designate as follows:—

- a. Comatose form.
- b. Convulsive intermittent.
- c. Convulsive and comatose.
- d. Delirious.

In the first form the patient exhibits, after a period by no means regular, symptoms of the chronic form, or rather, (and this is perhaps most commonly the case,) only some of them, as the tendency to sleep, loss of memory, a slight moroseness of disposition; more rarely, if the patients are closely observed, we shall see the symptoms of the acute form break forth all at once in the midst of apparently perfect health. Suddenly, without any warning or premonitory sign, in the midst of his occupations, in the street, or other place, the patient drops to the ground as if struck with apoplexy.

I saw a remarkable example of this last year at the hospital of Saint-Antoine.

At 10 o'clock in the morning, an old woman, thin and cachetic, was passing by the hospital, when suddenly she fell motionless upon the sidewalk.

She was immediately carried into my ward. All her limbs were completely relaxed; the features of the face, which was extremely pale, were not distorted, and there was no paralysis of either side of the body; the pupils were equally dilated, both insensible to the stimulus of light. It was impossible to obtain any reply.

On pinching the patient she drew up her limbs and uttered some intelligible words. The respiration was blowing and stertorous; pulse 50. A few hours later the woman died.

The next day, in the Amphitheatre, the vaginal touch revealed at once an enormous cancer, filling the whole pelvic cavity. On opening the abdomen, we found the ureters compressed at their entrance into the bladder by the uterine tumor, and considerably distended beyond the seat of compression. They were each the size of a small intestine, and the kidneys, completely destroyed, were converted into a species of fibrous case.

The consideration of the 2d form will be the subject of another article.

"WANTED!—Money from delinquent subscribers. All who will now pay up will receive our warmest thanks. We have thousands due us, and have not received \$100 in one month. Are all our honest subscribers dead? If so, hand in your names, and we will write your obituaries."—*N. Orleans Med. News and Hospital Gazette.*

We endorse the above, and will be glad to do the same thing for the memory of any of our unfortunates whose intentions to pay may have been hindered from maturing by the necessity of liquidating the debt of nature.

"BAD BREATH."—Many persons are greatly annoyed by having "bad breath," as it is termed. Not unfrequently this exists when there is no obvious cause for the odor of expiration. The teeth examined will be found sound, the gums healthy, the mucous membrane of the whole mouth healthy and well kept. The fetor may proceed from the stomach or lungs; but, when not depending on bad teeth or an uncleansed mouth, in nine cases out of ten it has its origin in the stomach. There is a simple, speedy and certain remedy for this repulsive affection, whether it depends on decayed teeth or undigested food, etc. It is the following:—Three hours after breakfast take a teaspoonful of the following mixture—chlorate of potassa, two drms., sweetened water, four ounces. Wash the mouth occasionally with the same mixture, and the breath will be sweet as that of an infant of two months.

O FOR A BOOK!—The medical scholar who shall take the literature of medicine and search it, as one assays quartz rock in which the yellow metal is invisible to the naked eye, and exhibits to the anxious gaze of the owner of the rock the segregated gold—we say, whoever shall thus assay medical literature, and separate the knowledge from the learning in it, whoever shall segregate the real from the ideal, the fact from the postulate—will immortalize himself and leave a perpetual legacy of great value to posterity.

It will not be necessary in such a work to compare knowledge with ignorance, or the modern with the ancient, but to unfold the medical literature of every age alike, and take from it simply, nakedly, the fact, and ruthlessly, remorselessly reject all the rest. Let us have no theory, no hypothesis, no mere probability in a work of this kind, but let whatever is not demonstratively true remain practically false till the demonstration shall have been accomplished by subsequent researches. Let us have one great text book of *knowledge*, not learning; let it be pure knowledge, every statement in it be a fact. Such a book would be like the white plume of Navarre, around which the chivalry of the kingdom would rally and do homage; it would be as the ark of God in the wilderness; the residence of eternal truth; it would stand, a pillar of fire in the darkness of all ages. Let the book of medical truth be written. There is now a vast mass of *knowledge* scattered through the literature of medicine, but the most of it is worse than useless; for a fact is so intimately associated with a falsehood, that most readers lack either the time or the ability or the inclination, or all, to separate the two; and thus there is constant antagonism in the teachings, and also in the practice of the profession. There is now a scepticism in the thinking portion of our profession that is eminently favorable to demonstrable facts. This very spirit would purify such a work of all alloy, and leave in it nothing but the pure ringing metal.

DISCOVERY OF THE SOURCE OF VACCINE MATTER AT TOULOUSE.—[Translation from *Gaz. des Hop.* of June 7th.]—An important discovery, which has created a great sensation in the medical faculty, has just been made at Toulouse.

For a long time, M. Lafosse, professor at the veterinary School of Toulouse, has been making researches with a view to finding the origin of vaccine matter, the source of which Jenner indicated. The opinion of the immortal author of immunity from small-pox had not been confirmed by experiment, but it is now demonstrated, by the discovery just completed, by the aid of numerous experiments which leave no longer any room for doubt.

Some months since, M. Lafosse learned that M. Sarrans, of Rieumes, had verified the existence in several horses of the disease called *water of the legs*, (*eaux aux jambes*.) One of these horses having been taken to the veterinary School, this *savant* professor recognised that the disease was that which Jenner had pointed out, without demonstrating it, as the probable source of the *cous-pox* of the cows from which he had obtained the matter with which he made inoculations for the prevention of small-pox. Convinced of the accuracy of this opinion, the demonstration of which he had so long been in search of, M. Lafosse went to work, and in the presence of his pupils, inoculated the foot of a two-year-old heifer with the pus from these pustules on the horse. This inoculation produced beautiful vaccine pustules.

Doctor Coyrel, official vaccinator of Toulouse, and Doctor Laforgue, surgeon-in-chief of the Maternity of our city, were immediately notified, and these two physicians came with many others to the veterinary School, when three children who had never been vaccinated were inoculated with the pus from the pustules of the heifer. This vaccination succeeded perfectly.

The prefect of Haute-Garonne having been informed of these facts, named a commission to continue the experiments; this commission consists of MM. Prince, Lafosse, Coyrel, Laforgue, Amen and Batut.—[*Jour. de Toulouse*.]

**EXSECTION OF THE ASTRAGALUS.**—On the 7th September, 1858, a man was taken to the Lariboisiere hospital, (Paris,) and placed under the charge of M. Chassaignac, or rather, of the internes, for outward and forward dislocation of the astragalus of the right foot. No apparent fracture. The internes placed patient under chloroform, and tried for fifteen minutes, by forcible extension and manipulation, to "set the joint," that is, reduce the astragalus, but failed. They put a poultice (!) on the whole foot, and placed it in a proper fracture box. The next morning the patient was again put to the torture, (except for chloroform,) thus graphically described, [literal translation,] "Chloroform was administered to the patient, and the attempts at reduction were renewed. These attempts resulted not in a reduction of the astragalus, but in almost complete replacement of the foot in its natural relation to the leg, which was accomplished by the rupture of the internal ligaments which we often felt tearing under our energetic traction. The foot was tormented (*tourmenté*) in all directions; but forced extension was particularly insisted upon, together with pressure backwards and inwards upon the salient portion of the astragalus."

The foot was kept in this forced position by a Scultetus, leeches, antispasmodics, *et id*, &c.

16th September—After sloughing of soft parts, astragalus exsected.

9th May, 1860—The foot is entirely useless and greatly deformed, and is suppurating by fistulous openings.

3d April, 1860—M. Chassaignac extracted the astragalus in another case in which it had been broken and dislocated the same day. He did not do this though until he had tried to reduce it by forcible extension in all directions, under chloroform, and had failed. The bones of the leg were also fractured. The patient died on the 6th of May of exhaustion. The dressing was bandage of Scultetus; medical treatment, low diet and opiates; local applications, cold or warm cataplasms according to indications.

These are the two cases on which M. Chassaignac principally based his recommendation to amputate the leg in dislocations of the astragalus, to which we referred in our last number, (p. 282,) and which was opposed on the spot by M. Broca.

**SPINAL ARTHRITIS.**—M. Piorry recommends iodide of potassium and phosphate of lime, in large doses, for arthritis of the vertebrae. Under these remedies, and absolute rest in horizontal position, a patient recovered who had a tumor at the last dorsal vertebra, which pressed upon the medulla spinalis so as to cause complete paralysis of bladder, rectum, genital organs, and lower extremities. When only six days had elapsed, during which he had regularly taken the remedy, the tumor had diminished, and the patient could move his toes.

**A SINGULAR CASE OF CHLOROSIS AND ANEMIA** is reported in the *Gaz. des Hop.*, treated successfully with ammoniuret of copper in the form of Swediour's pills. The symptoms in the case were briefly these: paleness, flabby flesh, almost colorless mucous membranes, chlorotic *bruits* in the vessels of the neck, small pulse at 66, no appetite, digestion painful and attended with vomiting, and violent pains in the stomach. Vomiting which had continued for three months whenever patient took any warm aliment. Vomited matter sometimes mixed with blood. Acute pain in epigastrium and abdomen; sensation of constriction; pressure with the hand on abdomen once caused an attack of hysteria. Menses irregular, scanty and pale, preceded by acute pains; frequent feeling of suffocation; desperate demands for air, an important sign of hysteria.

The whole surface of the body was found to be completely insensible, except the upper surface of right foot. She felt neither pinches, nor punctures with a needle. Insensibility extended even to the conjunctiva, lining of mouth and nose, on which sensation was not developed by any application that might be made. The vaginal lining is sensitive, but in a morbid manner: it is hyperæsthetic, and the touch causes acute pain, and is indeed impossible without causing spasms, followed by hysteric attacks. Besides anaesthesia, there is also amyosthenia, and moreover, what Dr. Bury calls defect of muscular harmony; that is, the disappearance of the normal proportion of one fifth which exists, in health, between the strength of the right arm and the left exercised in making pressure. This proportion also exists in all diseases, except nervous affections and chlorosis. This patient had been treated by various physicians, and by all the most approved remedies, without success.

Dr. Bury now tried the metal treatment.

This consists in applying to some portion of the surface of the body, say the fore-arm of a person affected with chlorosis, anemia, amyosthenia, anaesthesia, etc., any metal, say a thin plate of iron or zinc, or any other, and if the metal used is curative of the affection, it will immediately raise the temperature of the skin to which it is applied, and also between the seat of application and the heart, and to a greater or less degree in the opposite direction; restore the sensibility, muscular strength and cutaneous circulation. Punctures with a needle, which before refused to bleed, will now furnish blood as soon as the needle passes the epidermis. Painful heat and hyperæsthesia may supervene, as in the case reported in which plates of copper were applied to the skin. After the fitness of the metal has thus been verified by external application, its salts or other preparations are to be given internally, when the cure may positively be relied on. The metal tried in this case was copper, and the following pills given internally effected a cure in a week:

Ammoniuret of copper, 40 centigrammes; bread crumb q. s. to make 40 pills; dose—two, morning and evening.

She was seen eight months after the cure, still well. She was 24 years old, regular at 11, married at 15; had one child at 16, which died of convulsions, another at 18, which died of convulsions also in a few months; finally, her husband died, at which period the symptoms first enumerated began to appear.

The conclusion from this treatment is, that a metallic preparation should never be given internally except its external action be previously determined.

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THE "HESPERIAN" FOR AUGUST—edited by Mrs. F. H. Day—is one of the most elegant monthlies in the Union. It should have extensive patronage. The excellent lithocromes of the Bahia-like Sunflower in this number is worth half a year's subscription. We are sorry one of its contributors, whose literary abilities might be better directed, tries to sanctify novel reading. Certainly, this pastime which exercises such a baneful influence on the nervous system, and, consequently, on the health, particularly of the young, needs not the stimulus of rhetorical commendation. Until it shall be shown that the imagination is of more value than that intellection called reason, novel-reading as an exercise of the mind cannot be called beneficial, for life is not long enough for the indulgence of both. "Imagination, in a greater or less degree, everyone possesses, the child as well as the man; I might even say the idiot as well as the philosopher." \* \* \* "The fiction of 'The Lay of the Last Minstrel,' or of 'Waverly,' cannot be supposed to have been the result of any exercise of volition. They presented themselves to Sir Walter Scott's mind with no more effort than that which precedes the vision of a dream." As a relaxation, the occasional reading of a novel is beneficial to the mind of the adult hard student. The mind of youth needs no such burnishing. Physical exercise is a better relaxation, and better nutriment both to reason and imagination than the Babylonian furnace of fiction which burns to cinders both imagination and reason.

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THE PACIFIC MEDICAL AND SURGICAL JOURNAL will be published about the 20th of every month. Each number will contain all the news in medical science, whether in Europe or America, that shall have been made public in any language, within three months, at most, of the date of its publication. This Journal will be employed as a record of the *knowledge* of the profession more than as a record of its current literature. Hence, it will carefully record all discoveries, or resuscitation of forgotten facts in physiology, pathology, therapeutics, etc.

Each number will contain forty-eight pages in small type.

A limited number of legitimate advertisements will still be inserted at the usual rates.

Terms as per title page.

All communications, etc., should be addressed

DR. DAVID WOOSTER,

1883, San Francisco.

## Reviews.

THE following books were received from the publishers through Dr. Justin Gates, of Sacramento, who will, we understand, fill all orders for medical books published by Messrs. S. S. & W. Wood, on the shortest notice :—

OF NATURE AND ART IN THE CURE OF DISEASE; by Sir John Forbes, M.D., (Oxon.) F.R.S., Fellow of the Royal College of Physicians, Physician to the Queen's Household, etc., etc. From the second London edition. New York : Samuel S. & William Wood, 389 Broadway. 1858.

This work, an 8vo. of 261 pages, has been some time before the profession, but is none the less valuable because it is three years old. It does not attempt to degrade the art of medicine, but merely to circumscribe its pretension within rational limits. Mr. Forbes seems entirely familiar with his theme, and, like most scientific men in the profession, has a profound doubt of the ability of pills and powders and vile decoctions to *cure* disease. The following is a sample of his style and matter :

"It would still be in the power of the medical attendant to restrain occasionally, at least, over-action when distressing; to compose many functional disturbances; to allay pain; to procure sleep; to relieve uneasy sensations; to lessen morbid heat; to dispel morbid cold; to allay thirst; to free the bowels when painfully constipated; to check diarrhoea; to check or mitigate local inflammations, and feverishness in general; to institute a regimen calculated, either positively or negatively, to aid the conservative and restorative processes; to allay apprehension; to inspire confidence; in a word, to exercise all the functions and perform all the offices of an intelligent and benevolent helper of the sick. That, in so doing, many lives that would otherwise be lost must be saved, can admit of little doubt, whatever statistics may report; that the sufferings from the disease may be thereby greatly lessened, and its course shortened, can admit of no doubt at all.

"I will venture to add, that unremitting attention to these seemingly-smaller matters, and the administration of remedies rather as auxiliaries towards a cure than as positive means of cure, will bring about results of an infinitely more satisfactory kind, than can ever await the efforts of the physician who disdains to take up so humble a ground of action, but persists in seeking to vindicate for himself and for his Art the heroic character of a controller of Nature and a conqueror of Disease."

Nature will, undoubtedly, in most cases, cure disease, when the patient is in the state of nature; but it appears to us that there is no parallelism in the diseases of men and animals, or of civilization and of barbarism, for this very reason, that in one case the subject is under the control of instinct, or an intellectuality but a slight remove therefrom; while in the other, that is, in civilized society, the subject is under the influence of the vast pressure of art and science. All his mode of life is different from existence in the state of nature. Medicine is an art created by the artificial state of society, and necessary to it. It is a useless refinement of language to say that medicine does not cure disease, but only aids nature to cure it. If nature would fail to cure if left to herself, and medicine intervenes, and the patient recovers, is it nature or medicine that cures? Evidently neither, but both.

A person may have a mortified limb, say an arm; this, left to itself, would be amputated by nature perhaps, and the stump heal, may be, in the course of a year or two. But the knife and saw would remove it in a minute or two, and the patient would recover in a few weeks. A person eats indigestible food, (which in a state of nature he would not be likely to do); an emetic (which belongs to the art of medicine) relieves and cures immediately, while the same indigestible food, left in the stomach, might undergo putrefaction and cause purulent fever and death. In a state of nature, or under the control of instinct, the animal would not eat such food, or having eaten it, would reject it by the natural repugnance of the stomach to food unfit in quality or excessive in quantity. But artificial living has changed all this delicacy of stomach, and hence the necessity of medicine. Examples of the lack of pertinence of the arguments of Sir John, in this book, might be multiplied, but still we think it a valuable manual, which should find its way into families as well as into the hands of physicians. By a careful reading of it people would learn to place less reliance on cure-alls and isms and pathys, and more on rational care of the body.

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**CLINICAL LECTURES ON THE PRINCIPLES AND PRACTICE OF MEDICINE;** By John Hughes Bennett, M.D., F.R.S.E., Professor of the Institutes of Medicine, and Senior Professor of Clinical Medicine in the University of Edinburgh. From the last Edinburgh edition, with five hundred Illustrations on wood. New York: Samuel S. & William Wood, 389 Broadway; 1860.

Here is a book of greater specific gravity. It is ten inches long, six wide, and three inches thick, and contains a thousand pages, and you never read a page but you regret that it is so short. It is almost indispensable to the practicing physician; indeed, we should feel but little respect for a physician who does not have it within his reach. Some books are storehouses of knowledge: this is one of them. It is not a book to be read and laid aside; it should be kept where it is easily accessible; on a shelf just as high as the eyes, no higher nor no lower. Certain facts are here laid down like the lines in a geometrical theorem, and then all the steps of the demonstration gone through with on the patient till there is no room left for doubt, and conviction is a necessity not at all contingent on the volition of the reader. It is needless to quote from it. It would be like giving you the hand of a clock as a sample of the whole machine.

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**MIND AND MATTER: OR PSYCHOLOGICAL INQUIRIES;** in a series of Essays, intended to illustrate the Mutual Relations of the Physical Organization and the Mental Faculties. By Sir Benjamin Brodie, Bart. D.C.L., Vice President of the Royal Society: with Additional Notes by an American Editor. New York: Samuel S. & William Wood, 389 Broadway; 1859.

This is a book for the "upper ten thousand" in intellect. It contains 280 octavo pages of elegant and fascinating literature on the subject of which it treats. There is not a single *new* fact in it; but what is already scattered through many volumes that are seldom or never read, and which not one person in a thousand would ever undertake to read, is presented here in the form of dialogue and talked about with a conversational fluency exceedingly pleasant to read, when one needs a little refined and classic relaxation from severer studies. Everybody and his neighbor should read this book. It is a silvery rill rippling through the rocky desert of science.



**ELECTRO-PHYSIOLOGY AND ELECTRO-THERAPEUTICS**; showing the Best Methods for the Medical Uses of Electricity. By Alfred C. Garratt, M.D., Fellow of the Massachusetts Medical Society. Boston: Ticknor & Fields; 1860.

This is the work announced by us in our June No. (p. 244). From a hasty glance at the work and its illustrations, we think the card then re-produced no exaggeration. We shall take occasion to refer to it again in our next.

For sale by A. Roman, bookseller, publisher and importer, 127 Montgomery street, San Francisco.

[Continued from last number.]

From the New Orleans Medical and Surgical Journal

### Medical Chronology.

1380. Peter Argelata.
1406. The Emperor Vanceslas grants privileges to the establishers of public baths.
1410. Peter of Tussignana.
1413. Death of James of Forli.
1414. Whooping Cough in France; Ali beh Abi'l Hazaw Alkerschi ben Nasib.
1418. Valescus of Tarentum; James Ganivet.
1420. Birth of Peter Pinctor.
1425. Leonard Bertapaglia.
1428. Birth of Nicholas Leoniceus.
1438. John Concorregio.
1439. Death of Hugh Bencio.
1440. Death of Anthony Guainer.
1441. Death of Cermisoni; Mengo Bianchelli.
1447. Saladin of Arezzo.
1458. Birth of Sebastian Brandt.
1460. Death of Bart. Montagnana the elder; birth of Francis Giorgio.
1461. Thomas Linacer; birth of John Widmann, or Salicetus.
1462. Death of Mich Savonarola; birth of John Manard.
1463. Birth of Alexander Achillini.
1464. Hans of Dockenbourg.
1465. Death of James Despars.
1468. Hans of Dockenbourg cures Matthew, King of Hungary, of a wound; birth of Peter Baiero; Gregory Volpi.
1470. John Platearius.
1472. Death of Matthew Ferrari de Gradi; birth of Symphorian Champier.
1473. Death of Segismund Poleastro; birth of Augustine of Niphus.
1474. Birth of Martin Curtius.
1475. Germain Colot, a lithotomist, operates on a criminal for the stone.
1477. Birth of Bartholomew Maggi.
1478. Vincent Viano practices the art of fixing artificial noses; birth of Peter Brissot.
1481. Birth of Benoit Victorius.

(To be continued.)

THE  
Pacific Medical and Surgical Journal.

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Selections.

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[Concluded.]

From the New Orleans Medical and Surgical Journal.

Medical Chronology.

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- 1483. Birth of Jerome Fracastorius.
- 1484. Death of John Arcularius.
- 1485. Birth of John Lange and of Jason of Pratis.
- 1486. Sweating sickness in England; birth of John Fernelius.
- 1487. Birth of John Gonthier of Andernach.
- 1488. Pacificus Maximus publishes his poems.
- 1489. Birth of John Baptiste Montanus.
- 1490. Birth of Gabriel Fallopius.
- 1491. Birth of Victor Trincavella; John of Cube and Ardea, Burgomasters of Lubeck, give the first figures of planets; and Kethan publishes the first tables of Vegetable Anatomy.
- 1492. Birth of James Sylvius; the French disease shows itself in Italy, according to Fulgosi.
- 1493. Birth of Paracelsus and of Francis Arcaeus.
- 1494. Birth of Randolph Agricola; William Copus.
- 1495. Magnus Hundt, Marcellus Cumanus, Conrad Schellig, Wimpfeling, and Widmann, the first writers on syphilis.
- 1496. Sebastian Brandt and Grunbeck write on syphilis.
- 1497. Conrad Gilinus, Gaspard Torella, Montagnana the younger, Montetesauro, and Sebastian Aquilanus write on syphilis.
- 1498. Literary dispute at Leipsic, between Simon Pistor and Martin Pollich; birth of Andrew Lacuna and John Cario.

1500. Publication of the work of Peter Pinctor; birth of John Cornaro.
1501. Birth of Leonard Fuchs.
1502. Death of Anthony Benvivieni.
1503. Death of Peter Pinctor; birth of Charles Stephen.
1504. James Cataneous; birth of Jeremiah Thriverius and James Milich.
1505. The physicians of Paris write against the surgeons; a petechial fever in Italy; the Faculty of Paris take the barbers under its protection; death of Gabriel Zerbi; birth of John Gorreux, of Livinus Lemnius, and of Achilles Pirminius Gassarus.
1506. Birth of Julius Alexandrinus of Neustain, and of Fernelius; Alexander Bonedetti.
1507. Birth of William Bondeletus.
1509. Guaiacum introduced into England; birth of Ambrose Pare and of Michel Servetus.
1510. Whooping Cough in France; birth of John Cajus, of Volcher Coyer, of Bernard Dessenius, and of John Struthius.
1513. Death of Martin Pollich; birth of John Argentier, and of William Arragos.
1514. The surgeons of Paris reinstated in their privileges, and received into the Faculty; Whooping Cough in France; Brissot proposes his new method of bleeding in Pleurisy; birth of Andrew Vesalius.
1515. Birth of John Wyer; Arret declaring the Surgeons to be members of the Faculty of Paris.
1516. Birth of Conrad Gesner.
1517. Birth of Rembert Dodoens; Sweating Sickness in England.
1519. Guaiacum begins to be known; birth of Andrew Cesalpinus, and John Crato, of Crafthem.
1520. Death of Sebastian Brandt; Blenorragia begins to connect itself with Syphilis.
1522. Birth of Peter Foreest; death of Peter Brissot.
1523. Birth of Gabriel Fallopius, and of Thomas Erastus.
1524. Death of Thomas Linacer, and Nicholas Leonicensus.
1525. John of Romaine discovers the mode of operating for the stone by the great apparatus; birth of Ulysses Aldrovandus; death of Alexander Achillini, and of Andrew Torino.
1527. Petechial fever in Italy; birth of Louis Duretus, of Horace Augenius, and of John Moibanus.
1528. The sweating sickness in Holland and Germany; birth of Anuce Foes.
1529. Birth of Laurence Joubert.
1530. Birth of Julius Cæsar Aranzi, of Jerome Mercurialis, of John Schenk of Graffenburg, and of Leonard Thurneisser; introduction of Sarsaparilla into Europe.
1531. Birth of Henry Bruceus.
1532. Charles Stephens discovers the valves of the veins of the liver; Nicholas Massa discovers the lymphatic vessels of the kidneys; death of William Copus; birth of Martin Ruland.
1533. Birth of Theodore Zwinger, of Balthazar Brunner, of Claudius Dariotte, and of Andrew Laguna.
1534. James Dubois and Andrew Vesalius discover the valves of the veins; birth of Volcher Coyer and of Cornelius Gemma.
1535. Description of the Scurvy by Cartier; Pleurisy of bad character at Venice; introduction of the root of Smilax Aspera into Europe; birth of Symphorien Champier.
1536. Death of John Manard, and of John Ingolstetter.

1537. Birth of Jerome Fabricius of Aquapendens, of Henry Smetius, of Felix Plater, of John Posthius and of James Horst; inoculation already known at Corfu.
1538. Death of Augustin Nifo; birth of James Grevin, and of William Baillou.
1539. Laurence Colot practices with success the operation of the stone by the great apparatus.
1540. Birth of Thomas Jordan and of Peter Severin Francis Giogio; death of Mariano Santo of Barletta.
1531. Birth of Paracelsus, and of John Bauhin; Amatus Lusitanus makes known the utility of bougies against the Caruncles of the Urethra.
1542. Birth of John Nicolas Stupani.
1543. Susius maintains that the Venæ Cavæ derive their origin from the heart; birth of Constantine Varoli and of John Heurnius.
1544. Death of Matthew Curtius.
1545. William Valvayseur, Surgeon of Francis the 1st, separates entirely the bathers of the body from the Surgeons; birth of Julius Casterius; the College of Surgery, at Paris, obtains the participation in all the privileges of the Universities; establishment of the Botanical Garden at Padua; epidemic Phrenitis in France.
1546. John Philip Ingrassias discovers the Stapes; birth of Tagliacotius.
1547. John Baptiste Cannani discovers the valves of the Vena Azygos.
1548. Birth of Scipio Mercurius; Aranzi discovers the elevator muscle of the superior eyelid.
1549. Ma'hew Cornax operated for the stone on the Emperor at Vienna.
1550. Birth of Gaspard Bauhin, and of Emilius Campolongo.
1551. Sweating disease, Epidemic Pleurisy in Switzerland; annulling of the Decree of 1515, which declared the surgeons members of the Faculty of Paris; death of John Baptiste Montanus; birth of Hercules of Sassonia.
1552. Anatomical Tables of Eustachius; Dissecting Amphitheatre at Pisa; death of Bartholomew Maggi, and of Benoit Victorius; birth of Louis Settala.
1553. Michal Servetus points out the small circulation of the blood. He is burnt alive at Geneva.
1553. Death of Jerome Fracastor; birth of James Guillemeau, and of Prosper Alpinus.
1554. Gabriel Fallopius discovers the valve of the colon in monkies; death of Jeremy Thriverius and of John Echt; birth of John Baptiste Cortesi.
1555. Death of James Dubois; Diaz of Izla publishes his work upon syphilis; birth of Henry of Bra.
1556. Epidemic scurvy in the Brabant; anatomical amphitheatre at Montpellier; birth of Archibald Piccolhumoini.
1557. Whooping cough in Germany and France; Petechial fever in Poitou.
1562. Death of John Fernelius, of John Cornarius, of Lucas Ganrico, of Jason of Pratis, and of Peter Bairo; birth of John of Colle.
1560. Death of Oddus of Oddis; birth of Stephen Roiz of Castro.
1560. Peter Franco practices lithotomy by the high operation; Whooping cough at Zurich; death of Andrew Laguna, of John Dryander, and of Amatus Lusitanus: Posthius perceives at Montpellier the valves of the crural vein; birth of William Fabricius of Hilden.
1561. Birth of Sanctorius.
1562. Eustachius discovers the thoracic canal upon a horse; death of John Moibanus and of Thomas Houlier.
1563. Birth of Charles Pison; death of Gabriel Fallopius.

1564. Epidemic pleurisy in Switzerland; death of Charles Stephen and of Andrew Vesalius.
1565. Death of John Lange and of Conrad Gesner.
1566. Hungarian disease; death of Leonard Fuchs and of William Rondelot.
1567. Birth of Thomas Fyens.
1568. Birth of Thomas Campanella and of John Hartmann; death of Victor Trincavella, of Levinus Lemnius, and of Joseph Struthius.
1569. Death of Nicolas Massa and of Cuido Guidi; birth of James Zwinger.
1570. Death of James Grevin; birth of Antony Ponce of Santa Cruz.
1571. Cesalpin partially discovers the great circulation.
1572. Death of John Argenterius; birth of Daniel Sennert, of Gaspard Hoffman, and of Rodolph Goclenius.
1573. Death of Joseph Cajus and of Christopher of Vega; birth of Theodore Turquet of Mayerne.
1574. Birth of Robert Fludd; death of John Gonthier of Andermach, of Bartholomew Eustache, and of Bernard Deassenius; Fabricius of Aquapendente observes the valves of the veins.
1575. Death of Constantine Varoli; birth of Zacutus Lusitanus.
1576. Birth of James Gohory.
1577. Birth of John Baptiste Vanhelmont, of John Riolan, and of Fortuna Licet; singular syphilitic disease at Brunn, in Moravia; death of Achilles, Pirminus Gassarius, of John of Gortia, of Reald Columbus, and Adam of Bodenstein.
1578. Birth of Adrien Spigel; death of Antony Mizaud, and of Nicholas Manard.
1579. Birth of William Harvey, and of Cæsar Magnati; death of Cornelius Gemma, and of Francis of Arce; Baubin observes the valve of the cæcum; privilege of the Pope granted to the surgeons of Paris.
1580. Whooping cough at Rome; birth of Marcus Aurelius Severinus, and of Claudius Nicolas Fabre of Peirese; introduction of sassafras into medicine; death of Francis Valeriola, and of John Philip Ingrassias.
1582. Cereal convulsion in the country of Lunebourg; death of Andrew Ellinger, of Laurence Joubert, and of Thomas Erastus.
1583. Birth of Thomas Raynard.
1584. Death of Simon Peter.
1585. Death of Rembert Dodoens, of John Fyens, and of John Crato, of Craftheim.
1586. Death of Louis Duret, and of James Aubert.
1587. Birth of Ren Moreau; petechial fever in Lombardy.
1588. Birth of Olaus Wormius; death of James Dalechamp, of John Wyer, and of Valentine Weigel; cereal convulsion in Silesia.
1589. Birth of Lazarus Riverius, and of Peter of Marchettis; death of Jerome Capivacchi, and of Julius Cæsar Aranzi.
1590. Death of Julius Alexander, of Neustain, of Ambrose Pare, and of John George Triumph.
1593. Discoveries of Julius Casserius, in the organ of hearing; death of Henry Brucæus; birth of Nicolas Tulpus.
1594. Amphitheatre of Anatomy at Padua; death of Claudius Dariotte.
1595. Birth of Frederic Spee, and of James Scultetus; death of Anuce Foes, and of Leonard Thurneysser; history of the golden tooth.
1596. Cereal convulsion in Hesse; death of Al. Bodin; prohibition of the exercise of surgery to the barbers of Paris.
1597. Creation of the health service of the armies of France; death of Peter Foreest, and John of Posthius.

1598. Birth of Athanasius Kircher, of Peter Gassendi, of John Vesling, and of Henry Regius; Harvey goes to Padua.
1599. Death of Tagliacotus; birth of Werner Rolsink.
1601. Death of John Heurnius; birth of Guy Patin, and of Vopiscus Fortunius Plemp.
1602. Birth of Peter Severinus; death of Martin Ruland; privileges of college of surgery, of Paris, confirmed by Henry IV.
1603. Death of Andrew Casalpinus, of John Costæus, and of Horace Augenus; birth of Simon Pauli, and of Kenelm Digby.

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From the London Pharmaceutical Journal.

### The Arsenic Eaters of Styria.

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BY CHARLES HEISCH,

Lecturer on Chemistry at the Middlesex Hospital.

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AT the last meeting of the Manchester Philosophical Society I observe that Dr. Roscoe called attention to the arsenic eaters of Styria. Having for the last two years been in communication with the medical men and other residents in the districts where this practice prevails, I shall feel obliged if you will allow me through your journal to make known the facts I have at present collected. The information is derived mainly from Dr. Lorenz, Imperial Professor of Natural History, formerly of Salzburg, from Dr. Carl Arbele, Professor of Anatomy in Salzburg, and Dr. Kottowitz, of Neuhaus, besides several non-medical friends. If human testimony be worth anything, the fact of the existence of arsenic eaters is placed beyond a doubt. Dr. Lorenz, to whom questions were first addressed, at once stated that he was aware of the practice, but added, that it is generally difficult to get hold of individual cases, as the obtaining of arsenic without a doctor's certificate is contrary to law, and those who do so are very anxious to conceal the fact, particularly from medical men and priests. Dr. Lorenz was, however, well acquainted with one gentleman, an arsenic eater, with whom he kindly put me in communication, and to whom I shall refer again more particularly. He also says that he knows arsenic is commonly taken by the peasants in Styria, the Tyrol, and the Salzkammergut, principally by huntsmen and wood-cutters, to improve their wind and prevent fatigue. He gives the following particulars:

The arsenic is taken pure in some warm liquid, as coffee, fasting, beginning with a bit the size of a pin's head, and increasing to that of a pea. The complexion and general appearance are much improved, and the parties using it seldom look so old as they really are, but he has never heard of any case in which it was used to improve personal beauty, though he cannot say that it never is so used. The first dose is always followed by slight symptoms of poisoning, such as burning pain in the stomach and sickness, but not very severe.

Once begun it can only be left off by very gradually diminishing the daily dose, as a sudden cessation causes sickness, burning pains in the stomach, and other symptoms of poisoning, very speedily followed by death.

As a rule, arsenic eaters are very long lived, and are peculiarly exempt from infectious diseases, fevers, &c.; but unless they gradually give up the practice invariably die suddenly at last.

In some arsenic works near Salzburg with which he is acquainted, he says the only men who can stand the work for any time are those who swallow daily doses of arsenic, the fumes, &c., soon killing the others. The director of these works, the gentleman before alluded to, sent me the following particulars of his own case. (This gentleman's name I suppress, as he writes that he does not wish the only thing known about him in England to be the fact that he is an arsenic eater; but if any judicial inquiry should arise which might render positive evidence of arsenic eating necessary, his name and testimony will be forthcoming.)

"At 17 years of age, while studying assaying, I had much to do with arsenic, and was advised by my teacher, M. Bonsch, Professor of Chemistry and Mineralogy at Eisleben, to begin the habit of arsenic eating. I quote the precise words he addressed to me. 'If you wish to continue the study of assaying, and become hereafter superintendent of a factory, more especially of an arsenic factory, in which position there are so few, and which is abandoned by so many, and to preserve yourself from the fumes which injure the lungs of most, if not of all, and to continue to enjoy your customary health and spirits, and to attain a tolerably advanced age, I advise you—nay, it is absolutely necessary, that besides strictly abstaining from spirituous liquors, you should learn to take arsenic; but do not forget when you have attained the age of fifty years gradually to decrease your dose, till from the dose to which you have become accustomed, you return to that which you began, or even less.' I have made trial of my preceptor's prescriptions till now, the forty-fifth year of my age. The dose with which I began, and that which I take at present, I enclose; they are taken once a day, early, in any warm liquid, such as coffee, but not in any spirituous liquors." The doses sent were No. 1, original dose, three grains; No. 2, present dose, twenty-three grains of pure white arsenic in coarse powder. Dr. Arhele says this gentlemen's dose has been weighed there also, and found as above. Mr. —, continues: "About an hour after taking my first dose, (I took the same quantity daily for three months,) there followed slight perspiration with gripping pains in the bowels, and after three or four hours a loose evacuation; this was followed by a keen appetite, and a feeling of excitement. With the exception of the pain, the same symptoms follow every increase of the dose. I subjoin as a caution that it is not advisable to begin arsenic eating before the age of twelve or after thirty years." In reply to my question, if any harm results from either interrupting, or altogether discontinuing the practice, he replies, "Evil consequences only ensue from a long-continued interruption. From circumstances I am often obliged to leave it off for two or three days, and I feel only slight languor and loss of appetite, and I resume taking the arsenic in somewhat smaller doses. On two occasions, at the earliest solicitations of my friends, I attempted entirely to leave off the arsenic. The second time was in January, 1855. I was induced to try it a second time from a belief that my first illness might have arisen from some other cause. On the third day of the second week, after leaving off the dose, I was attacked with faintness, depression of spirits, mental weakness and a total loss of the little appetite I still had; sleep also entirely deserted me. On the fourth day I had violent palpitation of the heart, accompanied by profuse perspiration. Inflammation of the lungs followed, and I was laid up for nine weeks, the same as on the first occasion of leaving off the arsenic. Had I not been bled I should most likely have died of apoplexy. As a restorative, I resumed the arsenic eating in smaller doses, and with a firm determination never again to be seduced into leaving it off, except as originally directed by my preceptor. The results on both occasions were precisely

the same, and death would certainly have ensued had I not resumed arsenic eating." One of the most remarkable points in this narrative is that this gentleman began with a dose which we should consider poisonous. This is the only case of which I have been able to obtain such full particulars, but several others have been mentioned to me by those who knew the parties and can vouch for their truth, which I will briefly relate.

One gentleman, besides stating that he is well aware of the existence of the practice, says he is well acquainted with a brewer in Klagenfurth, who has taken daily doses of arsenic for many years. He is now past middle life, but astonishes every one by his fresh juvenile appearance; he is always exhorting other people to follow his example, and says—"See how strong and fresh I am, and what an advantage I have over you all! In times of epidemic fever or cholera, what a fright you are in, while I feel sure of never taking infection."

Dr. Arbele writes—"Mr. Curator Kursinger, (I presume curator of some museum at Salzburg,) notwithstanding his long professional work in Lungau and Binnzau, knew only two arsenic eaters—one the gentlemen whose case has just been related, the other the ranger of the hunting district in Grossarl, named Trauner. This man was at the advanced age of 81, still a keen chamois hunter, and an active climber of mountains; he met his death by a fall from a mountain height, while engaged in his occupation. Mr. Kursinger says he always seemed very healthy, and every evening regularly, after remaining a little too long over his glass, he took a dose of arsenic, which enabled him to get up the next morning perfectly sober and quite bright. Professor Fenzl, of Vienna, was acquainted with this man, and made a statement before some learned society concerning him, a notice of which Mr. Kursinger saw in the *Weiner Zeitung*; but I have not been able to find the statement itself. Mr. Krum, the pharmacist here, tells me that there is in Sturzberg a well known arsenic eater, Mr. Schmid, who now takes daily twelve and sometimes fifteen grains of arsenic. He began taking arsenic from curiosity, and appears very healthy, but always becomes sickly and falls away if he attempts to leave it off. The director of the arsenic factory before alluded to is also said to be very healthy, and not to look so old as 45, which he really is."

"THE early administration of alcohol in the manner I have recommended, exercises a most remarkable and equivocal influence in preventing or materially limiting the intensity of delirium. Delirium is a symptom of enfeebled and contaminated nutrition of the brain. It is to be looked for in all exhausting diseases, and in all acute maladies accompanied by high fever. You meet with it in the acute internal diseases, in the exanthemata, in erysipelas, in typhus and typhoid, in the rheumatic and gouty fevers, and after severe burns, or compound fractures, or great surgical operations, after parturition, and in profuse hemorrhage from whatever cause. In all such cases, the timely administration of alcohol will *prevent* or mitigate the delirium, and will check it if it have come on early. It is also applicable to the treatment of delirium of the hysterical and epileptic types, although in such cases it will not be found to tell with such marked effect as in the delirium which accompanies acute disease."—*Todd—Clinical Lectures.*

AGES OF PREGNANT WOMEN.—Dr. Granville, in some extensive statistics presented to the London Obstetrical society, states that English women arrive at the culminating period of prolificacy at the age of thirty years, and French women at twenty-eight.



From the Journal of Materia Medica.

## Cimicifuga Racemosa.

(BLACK COHOSH—BLACK SNAKE-ROOT.)

In the *Western Lancet* are reported half a dozen cases of neuralgia, successfully treated by the tincture of cimicifuga. The writer of the article says:—"To secure the prompt therapeutic action of the cimicifuga it would appear important to relieve the alimentary canal of saburral secretions, and, so far as possible, remove all irregularities of the circulating fluid. I do not know that its action tends in any manner to increase febrile reaction when present, nor to produce local determination to any particular organ; but, on the contrary, I am strongly inclined to believe, from my observations on the effects of this article, that it acts as a sedative to the heart's action. When excessive repletion or preternatural excitement of the heart and arteries is present, the constitutional action of the remedy was not manifested until these conditions were removed. Neither did it act in subverting the disease. When I am now called upon to treat an idiopathic nervous affection, I prepare the system for the use of cohosh, in the same manner as if I was going to administer quinine, to which I am strongly disposed to think it is related in its manner of action upon the nervous system. When the system is thus prepared in idiopathic attacks of neuralgia, I place more reliance in the above-mentioned article than any other in the materia medica. It is the nervous element of disease upon which the cimicifuga achieves its most salutary effects, and will be successful in controlling morbid action going on in that system, in proportion as it is complicated."

Its powers in rheumatic affections, and in anasarca, are greatly increased by administering it in the following combination:—

Tincture of cimicifuga, - - - - -	1 ounce.
Iodide of potassium, - - - - -	2 drams.
Syrup of ipecac, - - - - -	1 ounce.
Spring water, - - - - -	2 ounces.

Mix. Give a teaspoonful three or four times a day.

In chronic bronchial disease, and in the early stage of phthisis, it has been proved to be an excellent and efficient remedy when combined with an anodyne and the tincture of bloodroot.

Tincture of cimicifuga, - - - - -	1 ounce.
" " sanguinaria, - - - - -	1 "
Sulphate of morphia, - - - - -	2 grains.
Syrup of gum arabic, - - - - -	2 ounces.

Mix. Give a teaspoonful when the cough is troublesome.

In the treatment of dropsy, the following is a preferred prescription, and has been employed much by an experienced practitioner in Massachusetts:—

Tincture of cimicifuga, - - - - -	1 ounce.
" " myrrh, - - - - -	6 drams.
Laudanum, - - - - -	1 dram.
Tincture of red pepper, - - - - -	1 "

Mix. Take thirty or forty drops three times a day.

From the *Zeitschrift für die Gasamante Medicin, and Medico-Chirurg. Review.*

## Action of Different Medicines on the Mental Faculties.

BY PROFESSOR OTTO.

**ALI.** stimulant and exciting medicines increase the quantity of blood that is sent to the brain. If this quantity exceeds a certain amount, then most of the faculties of the mind become over-excited. Nevertheless, the degree of this action is observed to vary a good deal in different cerebral organizations; and it is also found that certain stimulants exercise a peculiar and characteristic influence upon special or individual faculties. Thus ammonia and its preparations, as well as musk, castor, wine, and ether, unquestionably enliven the imaginative powers, and thus serve to render the mind more fertile and creative. The empyreumatic oils are apt to induce a tendency to melancholy, and mental hallucinations. Phosphorus acts on the instinct of propagation, and increases sexual desire; hence it has often been recommended in cases of impotence. Iodine seems to have a somewhat analagous influence, but then it often diminishes, at the same time, the energy of the intellectual powers. Cantharides, it is well known, are a direct stimulant of the sexual organs; while camphor tends to moderate and lull the irritability of these parts.

Of the metals, arsenic has a tendency to induce lowness and depression of the spirits; while the preparations of gold serve to elevate and excite them. Mercury is exceedingly apt to bring on a morbid sensibility, and an inaptitude for all active occupation.

Of narcotics, opium is found to augment the erotic propensities, as well as the general powers of the intellect, but more especially the imagination. Those who take it to excess are, it is well known, liable to priapism. In smaller doses it enlivens the ideas and induces various hallucinations, so that it may be truly said that, during the stupor which it induces, the mind continues to be awake while the body is asleep. In some persons opium excites inordinate loquacity. Dr. Gregory says that this effect is observed more especially after the use of muriate of morphia. He noticed this effect in numerous patients, and he then tried the experiment on himself with a similar result. He felt, he tells us, while under the operation, an invincible desire to speak, and possessed, moreover, an unusual fluency of language. Hence he recommends its use to those who may be called upon to address any public assembly, and who have not sufficient confidence in their own unassisted powers.

Other narcotics are observed to act very differently on the brain and its faculties from opium. Belladonna usually impairs the intellectual energies; hyoscyamus renders the person violent, impetuous and ill-mannered. Conium dulls and deadens the intellect, and digitalis is decidedly anti-aphrodisiac. Hemp will often induce an inextinguishable gaiety of spirits; it enters into the composition of the intoxicating drink which the Indians call *bausa*. The use of the *amanita muscaria* is said to have inspired the Scandinavian warriors with a wild and ferocious courage. Tobacco acts in a very similar manner with opium, even in those persons who are accustomed to its use; almost all smokers assert that it stimulates the powers of the imagination.

If the psychological action of medicines were better known, medical men might be able to vary their exhibition according to the characters and mental peculiarities of their patients. The treatment of different kinds

of monomaniacal derangement also might be much improved; and it is not improbable but that even a favorable change might be wrought on certain vicious and perverse dispositions, which unfortunately resist all attempts at reformation, whether in the way of admonition, reproof, or even of correction.

**GREASE AN ANTIDOTE FOR ARSENIC**—M. Blondlot, of Nancy, France, has called attention to a very curious toxicological fact, namely, that greasy matters have the power of diminishing, considerably, the solubility of arsenious acid, either in pure water, or in acid and alkaline liquors. Thus, in contact with the grease, the poisonous properties of arsenious acid are very much decreased, and at the same time, it becomes more difficult to render its presence evident by chemical reactions. A very slight quantity of greasy matter, according to M. Blondlot's experiments, reduces the solubility of arsenious acid to one-fifteenth or one-twentieth of what it is in a pure state. This explains why arsenic, taken in the form of powder, remains some times for a considerable interval in the body without producing injury; it explains also how it is that, in cases of poisoning by arsenic, this substance has not been readily detected in such portions of the body or the aliments which contain much grease. It seems to teach us, also, that cream, for instance, is an excellent antidote for arsenious acid. Morgagni tells us, in his writings, that in his time, the Italian boatmen used to astonish the bystanders by swallowing, without hurt, large pinches of arsenious acid, having taken the precaution beforehand, of drinking a quantity of milk, or eating some greasy matter. As soon as the public had retired, they got rid of the poison by vomiting.—*N. Y. Medical Press* from *London Photographic News*.

**VENTILATION OF ROOMS AT NIGHT**.—An extraordinary fallacy is the dread of night air. What air can we breathe at night but night air? The choice is between pure night air from without and foul night air from within. Most people prefer the latter.

An unaccountable choice. What will they say if it is proved to be true, that fully one-half of all the disease we suffer from, is occasioned by people sleeping with their windows shut? An open window most nights in the year can never hurt any one. In great cities night air is often the best and purest air to be had in the twenty-four hours. I could better understand in towns shutting the windows during the day than during the night, for the sake of the sick. The absence of smoke, the quiet, all tend to making night the best time for airing patients. One of our highest medical authorities on consumption and climate has told me that the air of London is never so good as after ten o'clock at night.—*Florence Nightingale*.

**THE DEATH-BED OF AN ANATOMIST**.—Retzius, the great Swedish anatomist, whose death we recently announced, while dying made observations on the progressing dissolution of his own body. His last words to his attendants were: "The struggle of death is hard, but it is of the highest interest to note this wrestle between life and death; now the legs are dead, now the muscles of the bowels cease their functions; the last struggle must be heavy, but for all that it is highly interesting."

It is calculated that the entire world of smokers, snuffers, and chewers, consume 2,000,000 of tons of tobacco annually, or 4,480,000,000 of pounds weight.

From the New York American Medical Times.

## Death following Inhalation of Chloroform.

[Reported by Alexander River, Jr., M.D., Acting Senior Assistant, Bellevue Hospital.]

ON the morning of Aug. 1st, 1860, at or about 10.45 A. M., I was requested by Dr. Mason, acting house-surgeon of the first surgical division, to administer chloroform to Michael Lanahan, preparatory to the operation of circumcision. Patient was forty years of age, and complained of nothing but a chancre under the prepuce. I accordingly proceeded to administer the chloroform on a napkin, pouring out small quantities at a time, and allowing a space of from one half to one inch to intervene between the patient's mouth and the napkin, so that there might be a free admixture of atmospheric air with the anæsthetic agent. I observed, at first, nothing unusual in the behaviour of the patient; his respiration was natural, his pulse was good, and he soon exhibited the usual symptoms of muscular action which precede anæsthesia. The whole amount of chloroform thus far employed could not have exceeded an ounce and a half, and a large portion of this must have been lost by evaporation. After I had administered the chloroform four or five minutes I was startled by a sudden stertorous expiration, and immediately removed the napkin entirely. This was the first intimation that I had of the patient's being so nearly fully anæsthetized. For nearly a minute the patient continued to make stertorous expirations followed by regular inspirations, and I regarded these phenomena as nothing more than signs of the full anæsthetic influence; in a moment, however, after a long stertorous expiration he did not inspire. We immediately alternately compressed the thorax and allowed it to dilate by the resiliency of its walls, and in this way the patient continued to respire for a short time—occasionally missing one or two inspirations, and afterwards taking a long one; occasionally, also, he would take a deep inspiration unassisted by artificial respiration, though his pulse could not at this time be felt at the wrist. We now gave him brandy and a solution of carbonate of ammonia, both by the mouth and by injection. But, finally, after a stertorous expiration he ceased to breathe altogether. Dr. Mason auscultated his heart, but no sounds could be heard. We rolled him on his side and then back again, after the plan of Marshall Hall, and also employed the galvanic battery to the chest and the nape of the neck, occasionally putting the two poles over the origin and insertion of the thoracic muscles. A tube was passed into the trachea by Dr. Peugnet and the lungs inflated with the bellows; meantime the extremities were rubbed by assistants, and artificial respiration was continued. A tenaculum was inserted into the tongue, by which means it was drawn forwards and held in this position so that the air might have free access to the lungs. At the expiration of an hour and ten minutes the extremities had become quite cold, the pupils were widely dilated, the eyes fixed, the pulse for more than an hour had not been felt at the wrist, nor had the heart sounds been heard, and though the air could be heard rushing in and out of the throat it was evident that this was only mechanical. With the concurrence of one of the visiting physicians, who was present, all efforts to revive him were discontinued.

*Post-mortem examination twenty-eight hours after death.*—Present, Drs. J. R. Wood, Van Buren, Gouley, Meier, Green, and others. Weather warm, rigor mortis moderate, better marked in the lower than in the upper extremities; body well nourished; post-mortem congestion upon the posterior part

of the trunk and upon the head and side of the face; chancre on the glans penis; prepuce œdematous; abdomen tympanitic; dark blood escaping from the nose and some frothy mucus from the mouth. *Head*:—The calvarium being removed the dura mater was found normal; subarachnoid effusion enough to fill the sulci of the brain; on both hemispheres small patches of old lymph; superficial cerebral vessels congested; small amount of bloody serum in the lateral ventricles; brain otherwise healthy. *Thorax*:—Lungs collapsed; each pleural cavity contained about eight ounces of serum stained with blood; about two ounces of serum in the pericardium; otherwise both the pleura and pericardium were healthy; heart *soft* and *flabby*, and upon microscopic examination found to have undergone *fatty degeneration*; weight ten ounces; muscular tissue of right side appeared of the natural color; auricle and ventricle were opened but contained no clot; valves healthy, the muscular tissue of the left side also appeared of the natural color; the auricle and ventricle of this side were also opened but contained no blood clot. The valves healthy and of a bright color; one or two patches of atheroma upon the mitral valves. Both lungs were found congested throughout, particularly the posterior portion; in the right lung there were some apoplectic clots in the upper and lower lobes; left lung also contained an apoplectic clot as large as a filbert in the lower lobe; both lungs were œdematous and less crepitant than usual. *Abdomen*:—Small amount of bloody serum in the cavity; kidneys large and weighed about eight ounces each, and both healthy apparently; capsules more adherent than usual; both kidneys were somewhat congested. *Spleen* as large again as usual, but natural as regards consistency. *Liver* healthy, weight about five pounds, and somewhat congested. *Stomach* presented a patch of congestion near the cardiac extremity close to the œsophageal opening. There was also another patch of congestion near the pyloric orifice. *Intestines* were inflated with gas, otherwise healthy. *Bladder* firmly contracted.

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**A NEW CURE—THE MONTYON PRIZE.**—An interesting document has just been published in the *Journal of Public Instruction* at Paris. A poor governess, named Cleret, has discovered a supposed cure for the deaf and dumb. A commission, appointed to inquire into the matter, has reported rather favorably to the Minister of Instruction. The method employed by Mademoiselle Cleret consists in introducing sulphuric æther into the aural conduit, in doses of four to eight drops a day, for about twenty days, when the application is suspended for a short time and again recommenced. The report declares the subject to deserve attention, and that the experiments made have clearly proved the innocuous character of the application. Madlle Cleret discovered the supposed remedy by accident. She had been deaf for several years, and chanced to find a leaf from an old geographical work, in which it was stated that the native of a certain country made use of various substances to cure deafness. She then commenced operating upon herself; but having no chemical knowledge, she suffered much pain and disappointment before she hit upon the substance in question. A painful interest is thrown around the matter by the fact that the unexpected good fortune produced by the reception of the discovery—which was rewarded by the French Academy with the Montyon Prize—has unhinged the intellect of the poor governess, who is now under treatment in an asylum. Twenty-nine deaf and dumb children have been treated after the method indicated, and all have improved, though not in equal degree; and some adults have also derived considerable benefit. —*Medical Times and Gazette.*

From the Cincinnati Lancet and Observer.

## Some Remarks on a form of Syphilitic Aphonia little known.

BY M. DIDAY.

It is not a question of the more or less complete hoarseness which accompanies the alterations of laryngeal phthisis, in certain subjects who have arrived at the last stages of an inveterate syphilis. The aphonia which M. Diday describes, called by him *aphonie secondaire*, to distinguish it from the preceding, has some characteristics, an epoch of appearance, and a very special curability. The following summary is based on twenty cases:

Between the third and sixth months from the appearance of the primary accident, the patient, without being exposed to causes, nor presenting the symptoms of coryza, of laryngitis or bronchitis, perceives that he can no longer make his ordinary volume of sound. This alteration increases rapidly. In some days the trouble increases so much that he can only speak in a whisper, scarcely perceptible to the ear. Apart from the alteration in the sonorosity, the other functions of the vocal apparatus are intact. The pronunciation is clear and distinct, the respiration perfect; there is neither pain, cough, dyspnoea, nor fever. When this state is once established, it has little or no tendency to pass away spontaneously. It will continue indefinitely, without proper treatment. This state is more frequent in syphilitic patients than some believe, and oftener than the patients themselves suppose. When it exists in a mild form they do not perceive it, and they attribute the slight alteration of the voice to the ordinary causes of hoarseness. Professional singers complain of it, on the contrary, from its beginning, on account of the obstacle which it carries to the vocal emission, either as to its flexibility, its sonority, or, above all, to its extent; for it is the first sign which announces its invasion. One or two tones are almost immediately lost, from one day to the next, from the upper extremity of their habitual register. From the time of its appearance (four months on an average,) this aphonia is placed in the secondary stage. It is also accompanied by the *plaques muqueuses* on the tonsils. However, this coincidence is not constant, which is not an indifferent matter, as regards the etiology of the laryngeal affection. The protiodid. hydrg. in the dose of 8 to 10 centigrammes daily, in two pills, cures this affection with remarkable rapidity. Under its exclusive influence, the aphonia is modified in two days, and cured in six or eight, at the furthest.

In relation to the syphilitic lesion which produces this aphonia, we may attribute it either to mucous tubercles invading the orifice of the glottis, or to a paralysis of the muscles whose contraction gives to the borders of this orifice their revibratory power. M. Diday believes the second hypothesis to be the more probable. It is the one which accords the best with the absence of all pain, malaise, and the extreme promptness of the cure, coinciding sometimes with the persistence or disappearance a great deal more slow of mucous tubercles of the tonsils.

Syphilography gives us, for lesions incontestably nervous, the repetition of this influence so rapidly curative. A facial hemiplegia, produced by syphilis, improves in a few days from the effects of internal specific treatment — *Gazette Medicale de Lyon et Gaz. Hebdomadaire*.

From the North American Medical Reporter.

### Bismuth in Gleet and Leucorrhœa.

BY M. GABY, OF PARIS.

REPEATED trials have convinced M. Gaby that injections of oxide of bismuth constitute the very best treatment of gleet discharges. Thirty parts are suspended in two hundred of rose water, and so injected as to leave as large a deposit of the salt as possible in the canal. Three injections per day should be employed at first, and then fewer. He has collected forty-three cases thus treated with success, five of which he briefly relates. Urethral discharges, unconnected with gonorrhœa, as observed in certain diatheses, in masturbation, venereal excesses, etc., and increasing in quantity, even after pure connection, have been successfully treated by this means in three instances.

Balanitis and balanoposthitis, and herpes præputialis yield rapidly to bismuth, applied in powder, after cleansing the part, and then covering with cotton. The various forms of vulvar leucorrhœa, may be treated with bismuth. (One of these is entirely confined to the vulva, whether appearing as a consequence of follicular vulvitis, or without previous inflammatory symptoms. The latter is often met with in little girls.) Pregnancy, want of cleanliness, masturbation, worms, or contusion, are among the exciting causes. After removing all complication, the bismuth acts upon the discharge like a specific.

In the leucorrhœa of girls, powdering with bismuth is an excellent remedy. In ordinary vaginal leucorrhœa, occurring in women otherwise healthy, and having no other disease of the genito-urinary organs, the bismuth succeeds well.

Urethra-vaginal leucorrhœa, is almost always of infectious origin. In several instances reported, it yielded to bismuth after obstinately resisting other remedies. It is to be remembered that all the cases in which bismuth is useful are of the chronic description, and that pain and other signs of acute inflammation, contra-indicate its employment.

From the Philadelphia Medical and Surgical Reporter.

### A New Method of Dissection.

A GREAT desideratum in anatomy is, to obtain an exact idea of the real position of the internal organs. This, however, is far from being the case in dissections by the common method; since every section made on the body, rendered flabby and unelastic by death, produces a corresponding deformation; the soft parts contract, and nothing but an approximative idea can be formed of the relative position of the exposed parts before the operation. In order to obviate this inconvenience, Dr. Pirogoff, of Russia, has had the ingenious idea of subjecting the body, before dissection, to a cold of eight degrees centigrade (16 Fahr.) for the space of three days. By this means the body acquires a hardness like that of wood, its organs retaining, at the same time, their relative sizes, since the moisture they contain increases by congelation,

and thus counteracts the contraction which the solids would otherwise undergo.

The body in this state is subjected to the circular saw, which will cut off slices of the thickness of a one franc piece with the greatest nicety, either longitudinally, transversely, or along the axis of the member. By this means Dr. Pirogoff has been enabled to publish an anatomical atlas of every part of the human body, seen under three different aspects. In order to copy out a section obtained in the manner described, Dr. Pirogoff passes lightly over the frozen slice with a warm sponge; the surface is thus thawed for an instant, but a transparent film of ice is immediately afterwards formed over it. A pane of glass with lines drawn upon it crossing each other at right angles, so as to form so many squares, is then laid on the icy film, and the surface copied out upon paper, also divided into squares like the glass.

By this means the greatest precision is attained. The principle of refrigeration has been carried still further by the ingenious inventor, who by exposing a body to a cold of 18 degrees centigrade (four degrees Fahr.) reduces it to a consistency of stone, and then operates upon it like a sculptor with a chisel and mallet, laying all the viscera open without in the least degree injuring them. It is thus he has been enabled to ascertain that the cavities of the mouth, nose, the tympanum of the ear, and of those of the respiratory organs are the only ones which enclose air, and that everywhere else the surface of all parts of the body adhere immediately to the membranes enveloping the organs they contain; so that however apparently dissimilar their surface of contact may be, there is still no empty space between them.

**THE TURKISH BATH.**—In these Turkish baths, soap and water are purely secondary agents; they are considered as barbarous, clumsy, and effete means of cleansing. The bather is first conducted into a room, which is practically a large oven, lighted from the top, and filled with moist air. This is very far, however, from being a vapor-bath; the quantity of water-vapor is small, and does not affect the transpiration of water by the skin. Of course, a profuse sweating is induced, and the skin is thoroughly softened. It is a hot bath without water, or rather with the aid of very little water. From this chamber he passes to another—the calidarium—where freely perspiring, he is rubbed with towels or goat's hair gloves; and so great is the effect of the prior treatment, that the softened cuticle rolls off in thick flakes, and a new skin is found beneath, of which the subject of the operation little dreamed. No one who takes a Turkish bath for the first time but must be astonished at the quantity of the unnecessary cuticle which he carries about with him. Adepts tell you that "it requires great dexterity to perform this well without rubbing some places too much, and others too little." Now comes a drenching with warm water and soap, which is not the most agreeable part of the bath, and may be considered partially unnecessary. Then the bather passes back to the tepidarium, where he is dried and clothed in warm towels; and, after a pause, thence to his frigidarium, or cool chamber, where still clothed in warm towels, he sips coffee, smokes a narghilet, and indulges in beatific sensations which only those can know who have passed through the three purgatories of the bath. The Turkish bath is an agent of such great power in restoring the active functions of the skin, and the ordinary results of its application are so peculiarly agreeable and invigorating, that it will probably invite the attention of medical practitioners in its relations to disease. It is a powerful agent, of which the virtues are apparent; but incautiously employed by persons liable to congestion of the head or organs of the chest, it is not free from danger, as some unfortunate circumstances have already proved —*Lancet*.



**CAFFEIN AS AN ANTIDOTE TO THE POISONOUS EFFECTS OF OPIUM.**—Prof. Henry Fraser Campbell, of Georgia, in the *Southern Med. and Sur. Journal*, for May, 1860, publishes an article on this subject. After giving some account of caffein, and the use of coffee as an excitant, he describes the patient as a young man, 24 years old, who had, in a fit of mental depression, swallowed an ounce and a half of laudanum, nearly an hour before his visit—8 o'clock, P. M. Narcotism had proceeded so far that emetics could not be employed; the muscles were greatly relaxed, the tongue falling back in the mouth and tending to stop respiration, and respiration exceedingly feeble. Cold water was applied to the head for a time, artificial respiration resorted to, and the stomach pump then vigorously applied. At 12 o'clock P. M., the case seemed more hopeless, respirations *but four to the minute*. Artificial respiration, in a sitting posture, was then resorted to, which seemed to have a temporary good effect. Dr. Campbell then thought of coffee, but the patient could not swallow, and he doubted the propriety of using the stomach tube in the then condition of the patient. Finding it difficult to get a strong infusion of coffee, the idea of employing caffein occurred, and having dissolved twenty grains in a quantity of infusion of coffee, it was administered as an injection by means of a syringe. In half an hour the respirations were eight per minute. An hour had not elapsed before he "*forcibly jerked his left arm from the assistant*," and told them "to let him alone." The narcotism slowly passed off, and at ten o'clock next day, when Dr. Campbell called, the patient had left the hotel and gone home. Although the effects of the narcotism was apparent for several days, they soon wore off, and the patient entirely recovered. Dr. Campbell believes that the caffein in this case was largely concerned in the recovery, and points to that alkaloid as probably possessing valuable antidotal powers in cases of narcotic poisoning from this drug.—*American Journal of Pharmacy*.

**ALCOHOLIC TINCTURE OF ALOES AS A REMEDY FOR BLENNORRHOEA.**—This new remedy is proposed by Dr. Gamberini, a distinguished practitioner at Boulogne. A young man under his care had been afflicted for some months with a discharge, which injections of sulphate of zinc, ergotine, and perchloride of iron had diminished to only a very slight extent. Dr. Gamberini then prescribed three injections a day of the following mixture:—Alcoholic tincture of aloes, 16 grammes; water, 120 grammes. At the end of a fortnight all trace of the discharge had completely disappeared. The use of this topical application was attended with no other inconvenience than a slight momentary smarting. Similar encouraging results have attended the use of this remedy in several other cases.—*Revue de Ther.*

**EXPEDITIOUS METHOD OF CAUSING A CESSATION OF THE LACTEAL SECRETION.**—The most simple method, says M. H. Van Holsbeck, which I have followed for the last three or four years, and which I have never known to fail, and have found described nowhere, is the following. Introduce into the tip of a goose feather, prepared as for camphor cigarettes, a quantity of metallic mercury sufficient to fill it exactly, and fill up the ends with sealing wax. The patient suspends this little instrument in front of the sternum. In less than twenty-four hours the lacteal secretion will have entirely ceased, and two days after the breasts will have assumed their normal state.—*L'Abeille Medicale*. [Humbug!]

**THE INFLUENCE OF COHABITATION IN THE TRANSMISSION OF PHTHISIS.**—M. Brouchon concludes an interesting memoir upon this subject with the following propositions: 1. Pulmonary phthisis may become communicated in the course of time from individual to individual under the influence of cohabitation, and the consequent intimate relations—a proposition equally supported by reasoning, and by facts. 2. The transmission is usually operated from the older to the younger subject. 3. In the great majority of cases it takes place from the man to the woman. 4. It is to be feared in proportion as the subject exposed to it manifests a pre-disposition to the disease. 5. The influences which contribute to the result are identity of hygienic conditions frequent absorption of morbid exhalations from the diseased subject, and fecundation by the latter.—*Revue Medicale*, 1859, tome ii., p. 88

**SUBSTANCES INTRODUCED WITH THE AIR INTO THE LUNGS.**—M. G. Pouchet, in a communication made to the Academie des Sciences, (see *Gaz. Hebdomadaire*), states that he has found in the respiratory organs of man the same atmospheric corpuscles which he has found in animals. In two persons who had died in one of the Parisian hospitals—a man and a woman—whose lungs he injected, Pouchet found a notable quantity of wheat dust, particles of silica and fragments of glass, small particles of wood of a fine red tint, debris of clothing, and finally a larva of a microscopical spider, yet living.

M. Pouchet has met with debris of the same nature in the expectoration.—*Philadelphia Medical and Surgical Reporter*.

**GALEN AND THE STEREOSCOPE.**—Sir David Brewster, inquiring into the history of the stereoscope, finds that its fundamental principle was well known even to Euclid; that it was distinctly described by Galen one thousand five hundred years ago; and that Giambattista Porta had, in 1599, given such a complete drawing of the two separate pictures as seen by each eye, and of the combined picture placed between them, that we recognize in it not only the principle, but the construction of the stereoscope.—*World*.

**SALT IN THE TREATMENT OF MUGUET.**—Dr. Flugtel has treated the muguet in infants with advantage during several years by means of a solution of kitchen-salt. As soon as the affection appears he washes the mouth several days with a solution, dissolving as much salt as will lie on the point of an ordinary knife in a tablespoonful of water.—*Rev. Med.*, March, p. 305.

**THE SPECIES OF ANIMAL BY WHICH HYDROPHOBIA WAS COMMUNICATED.**—Out of a total of 288 cases in which reference was made to this point, 188 were stated to have been produced by the bite of a dog, 13 by that of a cat, 26 of a wolf, and 1 by the bite of a fox. In two cases in which the bite of a cat produced the disease, one animal is reported to have become rabid in consequence of an extensive burn, another owing to its having been robbed of its young. These cases are of considerable interest, as they tend to resolve the still doubtful question of the spontaneous development of hydrophobia in other species of animals than the canine.—*Annales d'Hygiene Publique*.

## Communications.

### Additional Notes on Oxaluria.

BY DR. JOHN B. TRASK.

SINCE the publication of my former article on "Oxaluria," I have incidentally met with this salt in the urinary excretions of those cases which have fallen under my examinations; with the exception of those detailed below, none of them, however, has been of sufficient import to be considered worthy of note by me, from the views formerly enunciated as to the pathological indications furnished by its appearance, and which will be found on page 407, Vol. II, of this Journal. The following cases are given at this time as an amount of additional testimony of the peculiar influence of the effects of local disease on the constituents of the urine in the production of this salt, and they perhaps may prove of some little value as showing more conclusively the negative evidence afforded when it is met with in the urine, so far as regards the peculiar diathesis attempted to be maintained by the British urinary pathologists. These papers are numbered consecutively from my former paper upon this subject.

EXP. 15. This case occurred in the person of a druggist from Humboldt Bay, and came under the joint observation of Dr. Wooster and myself, about one week after the publication of the preceding paper.

On examination, the following history and condition of the patient was found. Two years previously he had gonorrhœa, and had treated his own case. He had been troubled with a gleet discharge, however, nearly the entire period to the date from which the radical cure of the primary affection had taken place.

His condition at the date of examination is as follows. The general health, in all particulars, is good; there is not discoverable either functional or organic trouble of either the respiratory or digestive organs. He complains of painful micturition, varying in intensity of degree at different periods, and, at times, a sense of weight in the region of the bladder, often attended with dull aching. There is neither pain nor tenderness about the prostate.

A bougie was introduced, which developed two points of stricture between the orifice and bulb of the urethra. No other abnormal condition was found on a rigid examination.

He states that his urine deposits a white sediment very much more copious at times than it is at others, but that this deposit has been persistent for one year, and has maintained uniformity in its appearance during that time; it is of the character he brings for examination.

The *urina sanguinis* presents the following features. It is of a light reddish-straw color, clear on voiding, odor normal, reaction acid, Sp. Gr. 1.013. At the end of twelve hours it had deposited a light colored, half

cloudy sediment, which was very easily perturbed, and does not readily subside. On the stage of the microscope this deposit is found to consist of the octohedra of oxalate of lime, with mucus corpuscles and epithelia of the vesical sac. The morphological elements here found would point very directly to a chronic vesical catarrh, probably induced and maintained by the persistent accident in the urethra.

**EXP. 16.** This was a case of supposed gonorrhœa of long standing. The patient came from the south part of Yuba county, and on his arrival here became the patient of Dr. Toland, through whom I had an opportunity of making an examination of the urine, and learning the previous history and treatment and present condition of the patient. This case presents a double interest, inasmuch as the trouble had received a different diagnosis in Marysville and Sacramento, and from the general features presented, there is no doubt that the true state of the organs involved was occult in no trifling degree. In the second place, the case illustrates to a certain extent the principle involved in the subject at large on the production of this salt in the urine from purely local causes inducing abnormal secretion, as well from mechanical as functional irritation. The young man, from rather excessive sexual intercourse, found himself subjected to a discharge from the penis, and, as he supposed, had contracted a gonorrhœa; he placed himself in medical hands for treatment. From his description of his own case, it is doubtful to me if that disease was ever present, or it certainly was minus its peculiar symptoms. The usual routine for gonorrhœa was gone through with by his first attendant, and, as is usual in such cases, the symptoms were *statu quo*, to say no worse, "*all the means at our command failed to arrest the malady.*"

After medication had been exhausted, recourse was had to the use of the nit. argent. on several occasions, and the suffering urethra was thus subjected to a searing which would have destroyed a surface of steel deeper than the mucous membrane of that canal. *After five months of this active treatment the character of the discharge remained unchanged.* He now sought relief at Sacramento, was treated there five weeks with some mitigation of his symptoms. The physicians there had the good sense to omit the further use of the cautery.

His medical attendant at that place regarded the affection as a spermatorrhœa, and treated the case accordingly. This man's urine was handed me for examination without the history as above given, with the desire that I would "examine it for spermatozoa," with an implied doubt as to their existence in the specimen.

The urine presented the following features. Color pale straw-yellow, odor normal, somewhat cloudy, with light floating shreddy particles diffused. The last drops were tenacious, glary, and stringy. There was a small amount of light colored sediment which gave an alkaline reaction, but the fluid urine was acid. On the stage of the microscope, large mucus corpuscles, mingled with which were octohedra of the oxalate of lime; a few crystals of triple phosphate and pus globules could be seen. The last drops of urine were examined with the utmost care. *They contained no spermatozoa.* The urethra was carefully examined by Dr. Toland, but no stricture was detected. A mild palliative course was pursued; the patient soon after married, and, at last accounts, had not suffered from marital intercourse nor communicated any malady.

Excepting the local trouble, the patient's health was good, therefore the appearance of the oxalate of lime is not attributable to other causes than the specific effects of the abnormal urethral discharge in rapidly inducing those metamorphoses in the constituents of the urine which we so often witness.

**EXP. 17.** This case was that of a man from the vicinity of Placerville. He came to this city to be treated for spermatorrhœa, it being the sequel of a gonorrhœa, as he was informed by his physician. This case also was in the hands of Dr. Toland when I saw it, and through him obtained the examination.

On his arrival here he complained of the following symptoms. Frequent calls to micturate, which act was invariably attended with more or less pain and scalding. Discharges of urine small in quantity, but when a full evacuation occurred the stream was not regular. There was always a glary, tenacious character to the last drops, and a similar emission would occur during the night, or was observable in the morning in small quantity. The bougie develops little if any organic stricture, but points acutely tender in two or three parts of the urethra. There was a deep seated dull pain which the patient refers about the neck of the bladder. The diagnosis was chronic inflammation of the prostate and urethra.

The urine presents the following. It is reddish-yellow, odor normal, reaction acid, Sp. Gr. 1.016. On cooling, a mucus cloud is deposited. At the end of twelve hours there is a small quantity of a light colored sediment, easily perturbed and long in subsiding. The last drops of urine exhibit no spermatozoa; the deposit from the urine contains pus globules and myriads of minute crystals of oxalate of lime.

**EXP. 18.** The subject of this experiment is a resident of this city, and under the treatment of Dr. McMillan. I did not see the case, but relate the facts as communicated by his medical attendant. The patient when he came under his treatment was laboring under spermatorrhœa, and had nocturnal discharges, or, to use his own words, "he could always tell when he involuntarily passed the seminal fluid." The discharge consisted of glary mucus, with pus globules and a slight discoloration of blood, and a few spermatozoa. Two specimens of the urine were examined. Color very slight reddish-yellow, odor normal, reaction strongly acid, Sp. Gr. 1.013. Both deposit a light colored sediment. In one, pus corpuscles are abundant, and a trifling amount of albumen. In the other there is a copious precipitate of the oxalate of lime. It is proper here to state that this salt was found at the end of three days after the urine was voided.

This patient is a robust and healthy man in all particulars, except the local accident under which he is laboring.

To those interested in this subject, I would here state, that some instructive features occur in this case that it might be well to compare with Exp. 11th, page 406, Vol. II. Here will be found some slight differences governing the appearance of the oxalate of lime from those as they occur in the preceding case. There is evidently prostatic abscess in this case, as in Exp. 11th, but the reactions of the urine on the occurrence of the oxalate are widely different. This man passes spermatozoa when expelling the last drops of urine immediately after defecation.

(To be continued.)

**SUCCESSFUL HERNIOTOMY FOUR DAYS AFTER PARTURITION.**—M. Kuhn has published, in the *Gazette Hebdomadaire*, the case of a woman who was confined of her sixth child whilst affected with inguinal hernia of only a few months' existence. On the fourth day after parturition, symptoms of strangulation showed themselves, and M. Kuhn, finding the taxis extremely painful, operated at once, and succeeded in reducing. The woman did perfectly well.—*Lancet*, July 7, 1860.

## On the Climate of California in its relation to the Treatment of Pulmonary Consumption.

BY JAMES BLAKE, M. D., F. R. C. S.

In a former article on consumption (see *Pacific Med. and Surg. Journal* for July,) I attempted to point out some of the advantages our climate possesses for carrying out the open air treatment of phthisis, a plan of treatment which I believe exerts a more marked curative influence on the disease than all the drugs that have ever been administered.

But, although this is my own conviction, arrived at from personal experience in the treatment of the disease in this country, I would wish to adduce what collateral proof I can to support it, believing, as I do, that our success in combating the disease will be in proportion as we undertake its treatment with the firm conviction of the necessity of affording our patients the greatest amount of open air life they can command. Not that the treatment I would recommend has ever been systematically carried out to its fullest extent, but still the records of our science furnish many examples in which the importance of fresh air in curing phthisis is incidentally shown. A few of these examples I shall now bring forward, trusting that the importance of the principle I wish to establish will be an excuse for entering into statistical details.

The prominence that hygiene is assuming as a means of cure in many diseases, has undoubtedly prepared the way for a more radical application of hygienic principles to the treatment of consumption. Since Lannec, Louis, and Carswell first drew attention to the decidedly constitutional origin of the disease, removing it from the category of local inflammations, and since Todd and Bennett have recognized its decided connection with pre-existing mal-assimilation in the intestinal canal, an important step has been made towards treating it on rational principles, and at the same time, a constantly increasing belief in its curability has been gaining ground, not merely amongst the dreamers and specific-seekers, but amongst the practical common-sense members of the profession. We have now arrived, at least, at a rational foundation on which to base our treatment of the disease. Until within the last few years our pathology served to lead us astray, rather than to guide us into the right path; it was an ignis fatuus, leading through the bogs of indigestion, with its indications for expectorants, for sedatives, for astringents, measures directed solely against the changes produced in the lungs, but fatal to the digestive organs. Is it at all astonishing that the disease was inevitably fatal, at least in all those cases that came under treatment? What would be the mortality in cholera if, mistaking the suppression of urine as the principle element of the disease, we attempted to combat it by pouring into the stomach large doses of irritating diuretics? Would not cholera under such treatment be as fatal as phthisis? and yet such treatment would be but too closely analogous to what, until within the last few years, has been known as the palliative treatment of consumption. Well may Dr. Bennett, in his "Clinical Lectures on Medicine," published but two years since, remark, "The attempt to relieve distressing symptoms interferes more than is supposed with the curative treatment. Should it be a fact that the spontaneous arrestment of tubercle in its early stage, occurred in the proportion of from one-third to one-half of all the individuals who die after the age of forty," (*Bennett's Clinical Lectures*, p. 670,) what a heavy charge is

placed to the debtor's account of the palliative treatment of consumption. How many of these cases would have been cured, so as to die from other causes, had the disease been detected and been treated by expectorants, sedatives and antiphlogistics? for it must be remembered that Dr. Bennett's observations were made in 1845, or a year before Grisolle in his "*Pathologie Generale*," (2d ed., 1846,) thus alludes to our chances of curing the disease: "Although it is almost impossible ever to cure phthisis, yet our art has at its command means by which the sufferings of our patients can be alleviated, and the progress of the disease can be checked, or at least rendered less rapid." Supposing Dr. Bennett's figures to be even approximately correct, it becomes an interesting question to find out what were the conditions that led to the arrest of tubercular deposit in so large a number of cases, and that too, before the more rational plan of treating the disease had been pointed out. In the absence of any history of these cases, we can but make use to some extent of hypothesis. I think it is fair to suppose that but few of these cases had been submitted to medical treatment, and that therefore the greater number of them had been cured "spontaneously," as Dr. Bennett has it, or, more correctly, by some changes in the conditions in which the patient was placed, by which the digestive functions were improved. We can hardly call in the *vix medicatrix nature*, independently of change of conditions, for stopping the progress of a systematic disease depending not on the presence of a poison to be eliminated, but on the gradual deterioration of the blood by mal-assimilation of food. In the absence of medical treatment, it is probable that the arrest of the disease took place by the hygienic conditions in which the patients were placed being ameliorated. The choice of a more healthy occupation—a visit to friends in the country—more careful attention to diet—are the means that would probably be employed by the more rational of the laboring classes, when they found their health failing; and we now know that these means would be far more likely to arrest tubercular disease in its earlier stages than a recourse to drugs. That a slight change in the hygienic conditions in which men are placed, will make a most important difference in the rate of mortality from phthisis, the statistical tables that have been compiled in relation to this subject plainly prove. For instance, whilst amongst tailors in one hundred deaths from all causes, thirty-nine die of consumption, amongst butchers there are only eight deaths from this disease in one hundred deaths from all causes. This great difference in the rate of mortality from phthisis between these two classes of the population, is undoubtedly a complex quantity, and cannot be attributed solely to the more open air life led by the butchers; but there can be no doubt but that their open shops and out-door life, contribute largely to their immunity from the disease. The tables that have been drawn up by the medical departments of the army and navy in England, prove most conclusively the influence of living in the open air on the development of phthisis. From these tables it appears, that whilst amongst the troops on the Mediterranean station the deaths from phthisis are 5.9 per thousand, the deaths from the same cause amongst sailors amount to only 3.1 per thousand, or little more than one-half. That this difference is owing principally to the more open air life of the sailors, is rendered highly probable by the following considerations. In the first place, the cases of sickness from bronchitis, a disease contracted by exposure, were twice as many amongst sailors as amongst soldiers; and again, it is proved that in the smaller class of vessels in the navy, in those where there is most exposure, where the men are the least comfortable, the deaths from phthisis are one-half less than in ships of the line and frigates, where the men are far more comfortably lodged but have less fresh air.

When we see such slight differences in the amount of fresh air exert so marked an influence in preventing or arresting the disease, what may we not expect when the element of cure can be carried to its fullest extent, as it can

be in this country during the summer months, and that too at elevations where the free air exerts a far more beneficial influence on the digestive organs than it does at the level of the sea. Well may Dr. Richardson in his work on "The Hygienic Treatment of Consumption," observe, "In a cozy room the consumptive patient is bound never to live, nor in any room indeed for great lengths of time. So long as he is able to be out of doors, he is in his best and safest home. In the fields, on the hills, wherever the fresh air vivifies, where plants look most vigorous, and animals frisk about in the joy of health, there will the consumptive draw in his choicest medicine, there dissolve and throw off most readily the germs of his disease, and there repair most easily the tissues he has lost." Had the Dr. lived in California instead of in England, I have no doubt he would have removed his hospital for consumptives, at least during the summer months, to some locality in our mountains, where the oaks and pines would have afforded him a roof in accordance with his ideas, and the warm dry ground as many beds as he might require.

Before concluding this portion of my subject, I would call attention to a fact which must have come under the observation of many practitioners in this country. I allude to the great mortality amongst Indian children who have been domesticated as servants, a mortality three-fourths of which is caused by phthisis. The development of the disease is, I believe, more owing to the want of free air than to any other cause; were it the result of change in diet, disease would manifest itself earlier, or when they are first taken, whereas, they generally die some two or three years after they have been domesticated, or not until the digestive organs have suffered from a degree of confinement which, although such as would not be deleterious to our race, yet which the Indian with his scrofulous formation\* is unable to bear.

Another interesting example of the influence which the want of fresh air exerts in developing tubercle, is furnished by the mortality that occurs from consumption in menageries and zoological gardens, amongst the monkeys and larger carnivora. Every appliance that skill and science can command, is called into requisition to preserve the lives of these valuable animals, and yet everything is unavailing in warding off consumption, for unfortunately, in consequence of the inclemency of our northern climate, these inhabitants of a torrid zone have to be shut up in comfortable rooms, to which the external air can only be admitted in limited quantities, for fear of lowering too much the temperature. Against this limited supply of fresh air, all other hygienic means are unavailing, and consumption, sooner or later, carries them off. Could the lions be fed on fat pork and have cod liver oil with which to wash it down, I believe they would still die of the disease—nothing would counteract the ill effects of the limited supply of fresh air.

I trust that these few observations derived from the literature of the subject, will at least show that my experience of the curability of phthisis by the open air treatment is corroborated by a great deal of incidental evidence.

SACRAMENTO, Sept. 7th, 1860.

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\* I use the term "scrofulous formation" as expressing the general build of the Indian—large articular extremities, thick lips, and a want of activity of the vital processes. This formation seems to be the normal state of the Indian of these regions, and will effectually prevent their domestication to any extent, as a slight deterioration in the quality of air they breathe will lead to the formation of tubercle. Those who wish to bring up Indian children as servants, would do well to let them sleep in the open air, or in out-houses, instead of shutting them up in comfortable rooms.



## Complications of Scarlatina.

BY H. H. TOLAND, M. D.

### CONGESTION AND OTHER DERANGEMENTS OF THE KIDNEYS.

THESE organs I believe are always somewhat and often seriously affected from the time the eruption appears, and frequently in mild cases in which there is no cutaneous affection, anasarca and other evidences of renal disease are developed, which accounts satisfactorily for the numerous complications and sequelæ that supervene during the progress of scarlatina, and render it the most formidable of all the exanthemata, except variola, with which we have to contend. When the eruption is accompanied with œdema of the face or general anasarca, is livid, and pain either in the loins or lower extremities exists, the quantity of urine is almost always diminished, and is either high colored, brown, dark red, or albuminous, and unless this derangement receives early and proper attention, a sudden and fatal termination may occur, produced by the poisonous properties of the ordinary excrementitious materials of the blood that are retained, as well as the deleterious agents generated by the poison producing the disease, which accumulates with a rapidity in proportion to the disturbance the cutaneous function sustains by the eruption. When the kidneys become sufficiently implicated to disturb their function before desquamation is complete and the healthy action of the skin restored, it becomes much more serious and speedily fatal than the obstruction that results from the uriniferous tubes becoming impacted with the epithelial scales, detached from their inner surface during the period of desquamation, which necessarily succeeds the congestion or inflammation that existed during the eruptive stage, similar to that which appeared upon the skin.

Post-mortem examinations prove the existence not only of congestion but also of an eruption or efflorescence upon the inner surface of the urineferous tubes, that exists at the same time and resembles that upon the skin, which interferes seriously with the healthy action of the kidneys, and renders an accumulation of the excrementitious materials of the blood unavoidable. It will not be supposed that I attach too much importance to the urinary secretion in this disease, particularly when the poisonous effect of impure blood both upon the nervous system and vital organs is understood and considered. Many cases are unquestionably fatal that might be relieved if this complication received prompt and proper attention during both the primary and subsequent stages. During the six years that preceded the appearance of scarlatina as an epidemic in this city, I met with three cases in which an entire suppression of the urinary secretion occurred during the first six or seven days, although the number treated was much less than during the last year, which proves not only that these organs become diseased during the primary stage of scarlatina, but also the efficacy of diuretics in preventing this fatal complication, as not a single case has occurred since this treatment was adopted; and when they did, I have never succeeded during the short period afforded for medical treatment, between the cessation of the secretory action of the kidneys and dissolution, in restoring the function and thereby protect the system from the poisonous effect of the materials retained. So soon as the urinary secretion is considerably diminished, the face becomes pale and somewhat swollen, and the breath is more or less offensive, accompanied with

restlessness, quick pulse, hot skin, and great thirst; but when an entire suppression occurs, the pulse, which was before rapid, becomes more and more slow, until the pulsations do not exceed 20 or 30 per minute, which might when the change commences be mistaken for a mitigation of the disease, and regarded as favorable. In the cases previously mentioned, only two days elapsed from the time the heart began to exhibit the influence of the poison until dissolution occurred, although everything was done which the books suggested. We may by watching these organs during the early stages of this disease, and the judicious use of mild diuretics, easily prevent what we are unable to control when developed.

Although I have devoted less space to the complications of scarlatina than their importance demands, I hope I have written enough to elicit the attention of those more competent to investigate the subject than myself, and render it probable that almost all the complications depend upon the derangement of the urinary secretion that occurs during the acute stage of the disease. To be successful, the treatment must be directed to these organs. I will also endeavor to prove that the sequela resulting from the conservative or subsequent functional derangement of the same organs, may be so insidious in its progress as to be entirely overlooked until considerable constitutional disturbance is produced.

When the urinary secretion is diminished, the volume of the blood increases, and the solid excrementitious and injurious substances are retained in sufficient quantity to produce irritative fever, followed by inflammation of important organs, and frequently effusion of either blood or serum, or both, into the cellular tissue and serous cavities. This condition may follow the mildest forms of the disease, and I believe they are more likely to be followed by the sequelæ that will hereafter be enumerated, than the more violent cases, in consequence of the primary derangement of the kidneys not having received sufficient attention to prevent their development.

Ordinary cases of scarlatina, if properly treated during the acute stage and for at least three weeks after desquamation occurs, will rarely be accompanied by complications or followed by sequelæ. During the eruptive stage, when the function of the skin is imperfectly performed, the onus of removing from the blood the excrementitious and poisonous properties devolves upon the kidneys, and unless the treatment is directed especially to these organs, it cannot be successful. Otitis is a common and serious sequela of scarlatina. It is often of so acute and violent a character as to destroy by ulceration the mucous membrane, the tympanum, and even the small bones of the ear; and in a case which I observed some years ago, the meatus auditorius externus was entirely closed, with the loss of both the hearing and speech. During the prevalence of the late epidemic, no serious case of this kind was treated, and none that did not yield to the application of blisters behind the ears, and the local employment of astringents, particularly a solution of perchloride of iron, 20 drops to the ounce of distilled water. This was prescribed after the acute symptoms were controlled, to arrest the discharge and remove the thickening of the mucous membrane that remained.

Another very common sequela, particularly after exposure to cold, is ulceration of either the tonsils or pharynx, accompanied with enlargement of the parotid glands or lymphatic ganglions of the neck, and may prove extremely troublesome, particularly in malignant cases, when preceded by a protracted derangement of the kidneys of sufficient violence to produce a poisoned condition of the blood. In such cases, the opening made to permit the purulent secretion to escape, enlarges so much by ulceration as to prove extremely troublesome, if not fatal; the same action may be established in leech bites and obstinate and extensive ulcers, a result that may require several months, even with the best treatment, to cicatrize.

When after the disappearance of the eruption, should the skin remain hot, the pulse frequent and sharp, with sickness of the stomach, loss of appetite and constipation, accompanied with unusual pallor and restlessness, an attack of anasarca should be apprehended. In almost every case the quantity of urine is diminished, high colored, bloody or albuminous, and sometimes contains so many epithelia as to render it turbid, which may be followed either by an effusion into the cellular tissue, upon the brain, or in some of the larger cavities. Anasarca, which is the most common result of this renal derangement, seldom appears before the fourteenth day, and rarely after the expiration of the fourth week, and, when properly treated, was, during the prevalence of the late epidemic in this city, seldom fatal. Most of the children who suffered from this sequela were either neglected during the eruptive and desquamatory stages, or the treatment prescribed failed to increase the urinary secretion, by which alone this affection can be prevented. Besides blood, mucus, albumen, &c., above specified, the urine in malignant cases contains urate of ammonia and uric acid, and to the poisonous influence of these upon the nervous and vascular systems, when the elimination of these substances is arrested, should be attributed the great and in many cases the sudden diminution in the frequency of the pulse that occurs, and which is soon followed by delirium, convulsions, and death.

In the treatment both of anasarca, and effusion into the large cavities following scarlatina, it is almost unnecessary to say that our attention should be directed to the renal organs, and the treatment governed by the character of the secretion and the condition of the patient. When constipation and fever exist, after removing the intestinal derangement, counter-irritants, particularly ol. terebinth., should be applied to the lumbar region, and diuretics administered internally, such as pot. nitras, syr. scillæ, tinct. digit., ammoniæ carbonas, or a solution of the perchloride of iron, as the condition of the patient may indicate, and persevered with until the urinary secretion is increased in quantity and improved in quality. Tonics, gentle stimulants, and acids, largely diluted, should also be given to counteract the adynamic tendency that exists in such cases.

If simple diuretics and mild diluents be continued for two or three weeks after desquamation is complete, dropsy will seldom occur; three or four doses in twenty-four hours being generally sufficient to prevent this as well as many of the most serious complications and sequelæ of scarlatina, particularly if proper attention be paid to the condition of the skin, diet and ventilation. Many patients suffer more seriously during both the first and subsequent stages by confinement in heated and close rooms, than by exposure, with insufficient clothing to cold and humidity. In conclusion, I will mention a very distressing affection of the skin which has occurred sufficiently often to justify me in enumerating it amongst the sequelæ of scarlatina. In five cases an eruption which resembles urticaria more than any other cutaneous affection, has appeared from the tenth to the twentieth days, accompanied with sickness of the stomach, loss of appetite, and fever. The pruritus by which it is accompanied is of the most distressing character, which increases the importance of the difficulty. In every case it has yielded in two or three days to gentle purgatives, warm salt water baths, and antacids. The same treatment being efficacious in this affection that is usually recommended in ordinary cases of urticaria proceeding from indiscretions in diet, or in cases of idiosyncrasy, in which the simplest substances may be followed by the most extensive urticose affection.

## Selections from Scanzoni's Obstetrics.

*Translated for the "Pacific Medical and Surgical Journal,"*

BY F. MARQUARD, A. B.

[Continued from page 814.]

[This preface of Scanzoni was omitted by mistake last month.]

ALTHOUGH the description of the female copulative, generative and procreative organs, the sexual organs in general have their places in every anatomical text book, yet, nevertheless, it has always been customary to present to the readers of obstetrical text books and manuals a more or less elaborate treatise of the position, structure and functions of these organs. We too, in the present work, will follow the usual custom, especially as we have a thorough conviction that for the accoucheur an accurate anatomical knowledge of these parts with which his science and art are especially concerned, is partly indispensable, but, moreover, because in solely descriptive anatomical works many points of the greatest importance in obstetrical practice are only superficially treated, while many others which are the result of more recent anatomical and physiologic investigations, are not recorded with due care.

### INFLUENCE OF PERFORATION ON THE HEALTH AND LIFE OF THE MOTHER.

In order to ascertain the results of an operation, we generally compare them numerically, and base on the figures thus obtained our conclusion. It would be easy for us to present here a statistical review from the statements furnished by different accoucheurs, but we shall not do it, as we are thoroughly convinced that this method of fixing the value of the operation we now speak of would be a failure, and for the reason that there is not another operation to be found easily in which the successful or fatal end depends more on individual opinions of the operator as regards the indications for the operation, the moment most suited for its performance, the *modus operandi* which is to precede the perforation by which it is to be performed, and the further treatment required in single cases. While, for example, some accoucheurs regard perforation as an operation which should only be performed in the utmost necessity, when all other efforts to extract the child have failed, at a moment when the woman in labor is exhausted through these often injurious efforts, nay, even on the point of death, others seem to be prepossessed in favor of the perforator, and use it without having made the least attempt to extract the child's head undiminished. While now the former have usually only unfavorable reports of the operation, the latter can boast of remarkably successful results concerning the preservation of the mother; and it is evident, therefore, that in order to form a judgment of the operation, it would not be admissible to put these results numerically together and base on this number a conclusion, which will be impracticable for a middle way between the two extremes, which is the only correct one.

We will, therefore, not found our opinion upon a numerical combination as to the influence of perforation on the life and health of the mother, but take into consideration the moments which are important for the success of the operation.

We need no further proof then that the perforation of the child's cranium, when performed with a trephine-shaped instrument, (which we cannot recommend too much,) and with the necessary precaution, may be regarded as entirely safe for the mother; and we think ourselves justifiable in saying,

that the accoucheur who injures the genitals of the mother with a properly constructed trephine, had better turn his attention to something besides obstetrics; if he does harm with an instrument which can be so safely used, we may justly deny him all skill in using instruments more dangerous for the mother.

If we are asked why, even with the trephine-shaped instruments, and by the most careful and skillful use, cases are not rare where women die or are injured for life, we can only respond, that it is never really the opening of the child's cranium which causes an unfavorable result, but partly the *modus operandi* in the extraction of the child's head, partly the incorrect indication, partly the unfortunate choice of the period in which the operation was performed, partly the long continued experimenting before the child's head was diminished, which alone might cause a fatal result to the woman.

a. In regard to the choice of the means for the extraction of the perforated child's head, we are sorry to find that even in the present time are many accoucheurs who cannot renounce old usage, but always use forceps, sharp hooks, and other dangerous instruments, for the extraction of a diminished head. If we have but once witnessed such an operation, we cannot help wondering that not every woman treated in this manner pays with her life for her delivery, but not less astonishing is the stubbornness of those who reject a less dangerous instrument without ever having condescended to give it a trial.

We are convinced by experience that the results of perforation would in many more cases be favorable to the mother if a larger number of accoucheurs could be induced to put aside the instruments belonging to past eras of our science, and use in their place a properly constructed *kephalotribe*, which not only takes hold and retains the head now empty, but also diminishes by compression its volume, thus decreasing considerably the disproportions existing between the head and straits of the pelvis, and averting all danger for the mother caused by repeated introduction of the hands of the operators, (which cannot be avoided by the use of the old instruments,) by the tearing out of the sharp hooks or forceps, and by splinters of bone itself. If we were able to bring, through our words and example, this method of extracting a perforated head into greater and more general notice, we could congratulate ourselves in having diminished the dangers which are yet connected with this operation.

b. But while the present method is generally such as to deserve an essential part of the discredit given to perforation regarding the consequences to the mother, it depends not less on the opinion of some accoucheurs as to indications for diminishing the size of the child's head. It is a fact founded on experience, that many, overrating the influence of perforation for diminishing the volume of the child's head, use the perforator in cases where the disproportion between the pelvis and the size of the child are so great that the latter cannot be removed even after the greatest possible reduction of the size of the head. How many cases could here be related where, while the diameter of the pelvis is only two inches, or less, the child's head is perforated, emptied of its contents, and then all imaginable means for extraction of the child are used? It is easily perceived that by these experiments, protracted for hours or even days, sooner or later the death of the mother is caused without the chief object (extraction of the child) having been obtained. How many instances could we name, where by the smallness of the pelvis, the woman could only be delivered by the Cæsarian section, after perforation and other dangerous, exhausting operative manipulations had been tried in vain?

But all these unfavorable results cannot be charged to account of the perforation, but to the accoucheur, who over estimated his ability to conduct

the operation, and did not consider that the perforated head can only be diminished to a certain extent, and, therefore, always retains a volume which implies the impossibility of its being extracted, even when diminished, through a pelvis of a certain possible constriction. The above gives the rule, which we cannot remember too well, never to undertake perforation without we are certain, after a thorough examination of the pelvis, that it has the necessary size to admit the passage of the head diminished by perforation, where it is, however, always to be considered that the trunk of the child can only be compressed to a certain extent, and that not seldom it occurs that it is the extraction of the latter which offers the greatest danger to the mother. While the results obtained by measuring the diameter of the pelvis are of great importance in forming correct indications for diminishing the child's head, it is not to be understood that this is the only guiding and decisive moment. He who would undertake the perforation of the head of a full grown child when the pelvis is less than two and a half inches in diameter, is not more justifiable than one who without finding any objection through the smallness of the pelvis, rejects the operation of perforation as impracticable, and insists, after having ascertained the death of the child, upon delivery with the forceps, which are, necessarily, long protracted and extremely dangerous for the mother. Nothing could thus be gained for the child, but the greatest damage to the mother might be the result through inevitable injuries to the organs of generation. The followers of this method, of which there are too many, commit a great error in overstepping the limits in which favorable results can be expected from the forceps, and thus when at last convinced of the inutility of this method, find themselves compelled to use the perforator even after having lost all chance of saving the life of the mother.

It cannot, therefore, be denied, that there are some instances of diminished pelvis where every idea of perforation must be given up, but, on the contrary, we cannot assert that the real or supposed regularity of the pelvis, or insignificant exceptions from the normal size, always exclude the necessity of diminishing the child's head; extraordinary proportions of the size of the child, unfavorable situation and presentation of the head, can indicate perforation of the latter in an entirely normal and ample structure of the pelvis, just as much as in the above mentioned deformities of the pelvis. True, in the last mentioned cases it is impossible to be from the beginning as thoroughly convinced of the necessity of the operation as we are sometimes by diminished pelvis before the labor has commenced. But in the majority of cases the indication for diminution of the child's head presents itself only after several hours of labor, and after unsuccessful experiments to deliver with the forceps. This still more illustrates the great error of those who in giving the indications for perforation, are only guided by the visible degree of pelvic distortion, without considering those casualties which occur during parturition in their relation to perforation.

c. A still further cause why delivery so often terminates fatally where perforation has been performed is, that the accoucheur, although convinced of the necessity to perform it, postpones it until it is certain that the death of the child has taken place. Without arguing the question, so many times the subject of disputations, whether an accoucheur is justified in performing perforation on a living child, (a question which from a moral and legal point of view will never be unanimously settled,) we will only endeavor to prove that the medical faculty cannot object if we assert that in certain instances perforation of the living child is not only justifiable but utterly indispensable. If we are once convinced that reduction of the child's head is the only means of delivery, and if our mind is settled as to the indication of the operation, but we do not wish to perform it until we have undeceiving symptoms of the

child's death, then we are compelled to wait quietly till the child has perished either by the contraction of the walls of the uterus around its body, or by the compression of the head cramped in the straits of the pelvis, or by some other accident peculiar to the case. But it is a matter of experience that this event often requires a half or even a whole day; time sufficient to effect, even without immediate danger for the life of the mother, such changes in the whole organism, and especially in the generative organs, that a continuation of life would be almost a miracle. The natural consequence of protracted labor, nervous exhaustion, its injurious influence on the integrity of the blood, the continued irritation of the walls of the uterus (firmly contracted around the child,) which causes acute inflammations of the pelvis, often the origin of sphacelus, are, at once, circumstances to cause an unfavorable prognosis for the mother by postponing the operation; not considering that the rupture of the womb, profuse hemorrhage, a consequence of premature loosening of the placenta, and, also, sudden convulsions, are sufficient to bring the mother to the moment of death before the accoucheur is able to do anything for her preservation, while he is yet prevented from performing the operation by the continued life of the child. If, finally, the last spark of life in the child is extinguished after having waited hours, nay days, and the accoucheur undertakes perforation, he merely does it with the intention to avert the blame of having permitted a woman to die undelivered, for even the most credulous physician could now no longer hope to save the mother by the operation.

We shall perhaps be accused of having colored the subject too highly, and of having represented it on paper as it does not occur in life. Sometimes the termination may be less unfavorable, but, unfortunately, in the majority of cases it is as depicted by us. But we mean not to say that ever under well founded indications, we always perforate a living child's head. Whoever knows our conduct in delivery will admit that we do not deserve to be counted among the followers of *Deisch* or *Mittelhauser*, and that only in the utmost necessity we inflict a mortal wound on the child, and that we abstain from it as long as we believe ourselves, after a thorough investigation of all circumstances, justified in the opinion that the delay by postponing the operation further would in no way endanger the mother; at the same time we are thoroughly satisfied that we are right in upholding the principle that a living child may be sacrificed as soon as there is sufficient reason for the supposition that a longer remaining of the child in the cavity of the uterus will jeopardize the life of the mother. Others may deem it wrong; we, for our part, consider it perfectly admissible and justifiable from a moral, legal, and medical point of view, and we believe that we may announce our conviction that by a more general following of the above doctrine the cases where perforation terminates fatally for the mother would decrease in number.

From the above, it follows that perforation itself is an operation which does not endanger the mother, and that, certainly, in many cases it is in the power of the accoucheur to diminish essentially the dangers which are not dependent upon perforation, but on other circumstances which we have above mentioned.

This we may effect

1. By perforating the head with a trephine-shaped perforator;
2. By choosing for the probably necessary extraction of the child a properly constructed kephalotribe;
3. By considering the highest degree of pelvic distortion (which will be given by us hereafter,) as a counter indication;

4. If we are not only guided by the manner and measure of the pelvic deformities, but duly appreciate all other circumstances connected with parturition ;

5. If we do not postpone the operation until the mother through long protracted labor and various violent manipulations is in the greatest danger ; and therefore,

6. Abandon the principle that a living child should under no circumstance be destroyed to accomplish delivery.

(To be continued.)

## Editor's Table.

**SUDDEN DEATH CAUSED BY INSUFFICIENCY OF THE SEMILUNAR VALVES OF THE AORTA.**—(*Gaz. des Hopitaux*, 9th June, 1860.)—In 1844, M. H., Minister of Finance under the reign of Louis-Philippe, was working one morning with a *chef de division* of the ministry. The absence of a document compelled the latter to absent himself for a few moments. When he returned, five minutes or more after his departure, he found the minister with his body inclined backwards over his chair, his right arm hanging over the arm of the chair still holding the pen with which he had designed to write his signature to the document. All the means employed in such cases were resorted to to restore M. H. to life, but in vain : he was dead.

The autopsy, made by Blandin, revealed no lesion either in the brain or lungs. The heart was very large and loaded with fat ; its right cavities, distended with black blood, were a little dilated and very much thinned. The left ventricle was greatly hypertrophied in the walls and enormously dilated in its cavity. Excepting a few nodosities, the mitral valve was healthy ; but the aortic orifice was much constricted, and the sigmoid valves entirely ossified. There were a few cretaceous deposits in the aorta.

It is important to add that the health of M. H. had exhibited no grave derangement which could have presaged the sudden stroke which terminated his existence. He had never had any of the general symptoms pertaining to diseases of the heart.

Thirteen years after, in 1857, one of the most distinguished internes of the hospitals of Paris, now our *confrere*, Dr. Chas. Mauriac, frequently saw in consultation at *La Pitié*, a sub-officer of the guard of Paris who had long frequented the hospital for advice concerning palpitation of the heart, and a constant difficulty of respiration. In this case there was ascertained to be a double *bruit de souffle* at the base of the heart, and the diagnosis was aortic insufficiency. He had neither dropsy nor anasarca. For many months M. Mauriac did not see this patient, when he learned that he had died suddenly. One of his comrades who was on duty with him, left him alone to copy some document ; when he returned, at the expiration of a few moments, he found his friend dead in front of his desk. At the autopsy, no lesion was found any where except insufficiency of the valves of the aorta, with hypertrophy and dilatation of the left ventricle of the heart.



One year after this, Mauriac was interne at the hospital San-Antoine, under M. Aran, where he observed the following case, which we abridge.

A young man twenty-six years old, of robust constitution, about five months before entering into the hospital, had suffered for a fortnight with pains under the left false ribs. Six weeks before, he had palpitation for the first time, and one month previous, that is, the 3d of March, he was taken with obstructed or impeded respiration and pains in the left groin, which radiated along the lower extremity of the same side. The 2d of April, the date of his entrance into the hospital, his condition was as follows:—Slight emaciation; partial distension of the veins of the neck; visible arterial pulsations; skin warm and moist; 88 to 92 pulsations, vibrating, irregular, intermittent at the arterial diastole from time to time. The heart is considerably enlarged. The maximum of impulsion takes place in the fifth intercostal space 11 centimeters from the axis of the sternum; it measures vertically 11 centimeters upon the median line, and more than 16 centimeters obliquely from right to left. The impulsion is thrilling (*fremisante*) and accelerated at times as if the heart struggled to overcome some obstacle. The ear applied over the apex, perceives a double *bruit de souffle*, the second much softer, (*plus doux*,) more mellow, (*moilleux*,) and more prolonged than the first. Ascending towards the base of the heart, this double stethoscopic phenomenon persists and seems to reach its maximum of intensity under the second and third intercostal spaces, on the left side, in the vicinity of the sternum, also under the corresponding portion of this bone. This double bellows-murmur is also very marked in the aorta, the dullness (*matité*) of which is sensibly increased. Finally, in whatever place the ear is applied there is not heard any trace of the second normal beat of the heart. Bellows-murmur diastolic, intermittent, and very strong in the carotids. There is neither fever, nor œdematous swelling of the abdominal extremities.

The 8th of April, the sixth day after his entrance into the hospital, the patient died suddenly, at 7 o'clock in the morning. During the last few days of his life he complained of a feeling of severe oppression and a sensation of uneasiness (*gene*) at the epigastrium; the morning of the day before his death, he complained of great difficulty (*gene*) of respiration; however, he still kept about; in the evening he supped as usual; during the night he had some suffocating attacks, his sleep was agitated and painful; at seven o'clock in the morning he awoke and lay tranquilly in his bed. All at once he lost all consciousness, his head fell back, his limbs straightened and were convulsively agitated, his face became rapidly purple, and almost immediately grew pale, and in less than ten minutes he died.

The heart, emptied of its clots, measures 0.13 centimeters from base to point, also transversely at the level of the base. The pulmonary orifice was 0.075 millimeters in circumference. The ventricle is a little dilated and hypertrophied. The right auriculo-ventricular orifice is somewhat enlarged; its valves are supple and transparent; the left presents some granulations on the auricular surface. Very marked dilatation of the right auricle.

The aorta is dilated immediately after its issue from the heart in such a manner as to assume a position more anterior than usual, and crowd the pulmonary artery backwards; the dilation extends as high as the origin of the left subclavian; it has, however, preserved the flexibility of its walls; finally, in the neighborhood of its orifice it exhibits a beginning of atheromatous alteration. The left ventricle is enormously dilated. The dilatation affects solely the arterial portion, and the mitral valve is forcibly pushed backwards, also the fleshy columns inserted into it, which latter are atrophied rather than hypertrophied. The diameter of this ventricle is 7 centimeters, the thickness of its walls 13 millimeters. The mitral valve is supple, but the tendons which subtend it are thickened. Insufficiency of the sigmoid valves of the orifice of the aorta. A clot is prolonged to a height of 52 millimeters above

the origin of the vessel, and adheres to the greatly altered right valve. The anterior and posterior sigmoid valves are thickened and indurated, and have lost their elasticity, and contain, particularly at their bases, cretaceous and cartilaginous granules; their separating partition is much thickened. The right valve is almost entirely destroyed at its middle.

The observation of such data as the above, induced M. Mauriac to study insufficiency of the sigmoid valves of the aorta theoretically and clinically, considered particularly from a prognostical point of view, and as a cause of sudden death, which is one of the phenomena of its history least understood.

M. Mauriac has published a very remarkable work on this subject, and from it we have borrowed these details. We shall now present a summary of the important facts and practico-utile results which the author has brought to light by his researches. Dr. Mauriac proceeds to investigate the mechanism of sudden death, to study the elements of prognosis, and the therapeutical indications to be deduced from a knowledge of this mechanism.

When there exists, says M. Mauriac, an *inocclusion* of the sigmoid valves of the aorta, and when the hiatus which is the consequence of this is insufficiently large to permit the re-entrance of a considerable quantity of blood, at the instant of the heart's diastole, into the interior of the left ventricle, the latter becomes more or less distended, and it is compelled to increase its activity to impel into the whole arterial system this excess of blood added to the amount which comes from the lungs. There results a hypertrophy of the walls and a dilatation of the cavity of this ventricle.

So long as these lesions do not go beyond a certain point, and particularly so long as they remain simple, that is to say, are not complicated with any other morbid change, they oppose the stagnation of the blood in the lungs and in the cardiac cavities; and are, therefore, salutary, because they prevent the insufficiency from producing any considerable perturbation in the equilibrium of the general and pulmonary circulation. But hypertrophy and dilatation of the left ventricle of the heart, consecutive to valvular insufficiency, tend almost always to indefinite increase; and in proportion as they increase they lose more and more the character of a, so to speak, normal and physiological hypertrophy and dilatation, because they become the seat of secondary lesions which embarrass the circulation in the heart's own vessels and alter its muscular fibre.

Nevertheless, when the hiatus of insufficiency is small, when there does not exist a considerable stricture of the aortic orifice, or a complete rigidity of the aortic valves; when the inflammatory morbid process which has produced the insufficiency and the lesions at the origin of the aorta, is arrested and definitively extinguished, it is possible that the hypertrophy of the left ventricle having reached that degree which the maintenance of the equilibrium of the circulation requires, will desist in its progressive movement and remain stationary during the remainder of life. M. Mauriac considers it certain that such a condition exists in those individuals who have been for a long time affected with aortic insufficiency, and who finally suffer only slight inconvenience referable to the heart, such as palpitations or momentary dyspnoea, etc. He has seen cases in which auscultation left no doubt of the existence of an inocclusion of the aortic semilunar valves, who had not even supposed they had any disease of the heart: percussion in these cases revealed only slight enlargement of the heart. The hypertrophic process had no doubt subsided, and to this cause they were indebted for their undisturbed health.

Unfortunately, hypertrophy and dilatation of the left ventricle rarely remain circumscribed within these limits. There are many causes which tend constantly to augment these two lesions in which consists all the danger of insufficiency, and the action of which culminates in perturbations of the heart's own circulation.

The organo-pathological development of hypertrophy and dilatation of the left ventricle, consecutive to sigmoid insufficiency, presents three stages: one stage of simple and salutary hypertrophy and dilatation which augments the labor of the heart, and may counteract in part for the injurious effects of the valvular alterations; a stage of hypertrophy and dilatation complicated with active or passive congestion and inflammation; a stage of hypertrophy and dilatation complicated with the preceding lesions, and with more or less extensive fatty degeneration. Fatty degeneration is very frequent in aortic insufficiency; it is the last step of morbid organization of which the ventricular walls become the seat, when hypertrophy and dilatation are not arrested in their first stage. Among the numerous causes of this complication, M. Mauriac thinks that which plays the greatest part is the progressive enfeeblement of the interstitial circulation of the heart, either when this enfeeblement depends upon aortic insufficiency itself, or at the same time, upon alterations in the origin of the aorta and cardiac arteries. Still, as these alterations run a course essentially chronic, as well as the valvular lesions, it results that it is only at a very advanced period of cardiac disease that degeneration is observed.

When it has invaded the whole organ there are observed a considerable thinning of the walls, dilatation and extreme flaccidity. Hypertrophy of the walls is then in this phase of the malady replaced by atrophy; but the dilatation persists and tends even to become increased, if death does not intervene and suddenly remove the patient.

Hence we arrive at the conclusion, that *the organic cause which induces sudden death in cases of aortic insufficiency, is hypertrophy and dilatation of the left ventricle, complicated with congestion or degeneration [of the heart]*

From the instant these lesions have taken place, the patient is momentarily in danger of sudden death. Finally, this mode of the termination of life never occurs in those cases that, consecutively to inocclusion of the aortic valves, have only moderate dilatation and hypertrophy. All the observations collected by M. Mauriac prove this fact in a categorical manner.

These premises admitted, he explains the mechanism of sudden death.

The heart, the center of sympathy upon which are accumulated by a reflex movement, all the impressions of the organism, whether morbid or physiological, becomes, in consequence of the lesions suffered, excessively susceptible to the perception of these impressions. Thus every moral perturbation, every affection of the mind, which disturbs or tires the centers of innervation, all fatigue proceeding from excessive muscular exercise, or from whatever expense of nervous influx, are so many causes which may accidentally induce death.

Under the influence of any of these causes, the ventricular systole is enfeebled, becomes incomplete, drives into the arterial system only a portion of the blood which was accumulated in the ventricular cavity, at the moment of the diastole. But the elasticity and contractility of the aorta and its branches not being diminished, reacts upon the blood-columns and impels a recurrent jet through the hiatus of insufficiency with the same energy as previously.

It follows that, after the second systole, the heart is overcharged with a mass of blood exceeding the amount it contained at the instant it was surprised with the debilitating action of the accidental cause. If it recovers its energy, the circulating equilibrium may be restored; but if its feebleness continues, the difficulty increases, and the quantity of blood which accumulates in its cavity is augmented at each systole, and at each reaction of the aorta upon the liquid column, which is no longer shut off from the heart by the complete partition which is made in the normal state by the aortic valves.

The accumulation in the ventricular cavity, of the blood which comes from the lungs and the afferent arteries, dilates the left ventricle more and more, and finally, it can no more contract.

From all that precedes, it follows, that as to the prognosis, that of all the diseases of the heart, there is none the result of which is so difficult to be foreseen, or that exposes the physician to more deception and risk of mistake.

Here are a few signs which may enlighten him upon the gravity and result of the affection :

Shock of the point of the heart several times the thickness of a finger outside of a line vertical with the left nipple, energy of its impulse, absence of normal resonance over a considerable extent, indicating that the hypertrophy and dilatation of the left ventricle have reached that degree where sudden death by quick cessation of the movements of the heart becomes imminent ; all these are signs of the worst significance.

In general, only uncertain inferences as to the result can be drawn from abnormal murmurs, (*bruits*.)

The *depressibility* of the pulse which is observed at its highest degree when the hiatus of insufficiency is very large, should be regarded as a sign of bad import. Among functional troubles, accessions of dyspnoea, above all, when accompanied with violent palpitations, are also of serious significance ; it is the same with syncope, which, extremely grave in all affections of the heart without exception, is much more so in aortic insufficiency than in any other disease of the organ.

The resources of science are, unfortunately, too often powerless in this affection. All the efforts of the physician should be directed against the most imminent danger, that of syncope, by all the hygienic means susceptible of detaining in its progress the evolution of the organic lesions. The facts contained in this work [of M. Mauriac] demonstrate the danger of the method of Valsalva, of which the indications have been imagined to exist in the fullness and apparent force of the arterial diastoles. Bleeding should be practiced only with great moderation, and only in cases where there exists an engorgement of the lungs which impedes the general circulation.

Sedatives and *cardiaco-vascular hyposthenisants* (!) (*digitalis*), are indicated as palliatives in all cases where there are violent palpitations, dyspnoea, or precordial anxiety. Finally, the true curative indications are deduced from the course of the morbid process of which the walls of the heart are the seat : it is especially by revulsive treatment, (dry cupping, scarifications, temporary blisters, cauteries, etc.,) that the indications of treatment are fulfilled.

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**MONSEL'S SALT.**—We advise physicians in the interior of Oregon who may need Monsel's Salt, to be extremely cautious in its purchase. A slight error, or a little carelessness in its synthesis, renders it worthless, even when it bears so close a resemblance to the pure article as to be undistinguishable except to an expert in its manufacture.

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**CHLOROFORM.**—Mr. Wakelee has a constant supply of chloroform of much better quality than that generally offered in the market. It is *almost* chemically pure, whereas the chloroform of "the trade" is often *altogether* impure, or purposely adulterated.

There is not a doubt but the presence of fusil oil in any considerable quantity in chloroform adds materially to the *necessary* risk which always attends the administration of this anæsthetic. This poisonous impurity is not present in the sample of chloroform before us from the laboratory of the apothecary, &c., above named, whereas in another sample from another house it is present in a very appreciable quantity.

FOOD OF THE CHINESE.—M. the Abbe Lenoir has presented to the *circle de la presse scientifique* a work entitled, "On the Utilization of everything in China, for Food." We extract from this work the following passage.—[*Gaz. Hebdom.*, 28th July, 1860.]—The flesh of the dog passes, in Europe, for the worst of all flesh; it is here considered uneatable. The Chinese think otherwise: they fatten dogs that are getting old and then eat them; the butcher's stalls are garnished with dog-flesh as well as the flesh of other animals. Farmers have cultivated a species of dog on purpose for fattening, which they call butcher's dog; it is a variety of the wolf dog, with erect ears, distinguished from other varieties in having the tongue, palate, and the whole interior of the mouth of a black color.

It is said that in certain restaurants of the great cities of France they serve up cats for rabbits. The Chinese employ no such mystery; they consider cat-meat excellent, and in their butcher shops may be seen large supplies of cats suspended palpably with head and tail entire. On all the farms these animals may be seen fastened with small chains, to be fattened with the remains of the rice which would otherwise be lost. These are large cats which resemble our counter and hall cats: the quiet which they are compelled to keep by the chain facilitates their fattening.

The rat is another animal which occupies a large place in the nourishing list of the Chinese; they eat him the same as the preceding, either fresh, or salted; salted rats are destined principally for junk's use. The farmers perceiving that this product contained a means of fortune, have invented a very ingenious method of profiting by the fecundity of this animal; they have *rat-coles* (excuse the word,) the same as we have *dove-cotes*; to establish the residence of the rats, they furnish their favorite hiding places with bottles large enough for the introduction of the hand; these are fixed in the masonry of the wall; the rat takes them for crevices, makes his nest there, and there rears his young, and from time to time the farmer goes and collects his toll of young rats, just as we do of young pigeons, when we desire a tender morsel.

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THE CONSTITUTION OF THE GERMANS AND FRENCH.—Tacitus says the soldiers of Vitellius (middle of the first century) pitched their tents in the abhorred regions of the Vatican, (the site of St. Peter's,) whence frequent deaths occurred among the soldiers in general; "And as the Tiber was near, their eagerness for water, and their impatience of heat, broke up the sickly [!] constitutions of the Germans and Gauls." This is the only intimation we recollect ever to have seen that the Germans and Gauls were once of a "sickly constitution."

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THE "GAZZETTA DEGLI OSPEDALI," Genoa, Italy, now reaches us regularly. It is one of our most welcome exchanges. It is just our own age, being in the seventh month of its third year. It, also, contains 48 pages, 8vo. Subscription price, 14 francs (\$2.64) per annum. It is edited by Signori R. Granara, A. Bellagamba, P. Arata, L. Viviani. All communications addressed post-paid to the *Gazzetta Degli Ospedali*, Genoa, Libreria Beuf, [Italy.]

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THE COLUMBUS REVIEW OF MEDICINE AND SURGERY. W. L. Mc. Millan, M.D., Editor. Vol. I. No. 1, August 1860.

We have read the articles in the present number, and find them well "got up," and have no doubt the Review will be sustained by the profession of Ohio, and prove a valuable aid to the advancement of medical knowledge.

"THE REVIEW will be issued on the first of every alternate month from the first of August, 1860, and will contain 96 pages, exclusive of the advertising sheet, printed on good paper and from clear type.

"It is intended to be a reliable, PRACTICAL Journal of Medicine and Surgery in all departments. Arrangements have been made which will place its continuance beyond the possibility of a failure, and we solicit the support and co-operation of the profession.

"The following is the plan of the work :

"Part I. Reviews. Part II. Essays and Correspondence. Part III. Foreign Selections. Part IV. Bi-Monthly Abstract.

"TERMS.—Two Dollars a year, in advance. After the second number, THE REVIEW will be sent to only those who pay for it.

"CLUBS.—Clubs of four or more, having the same Post-Office address, will be furnished THE REVIEW at the rate of *One Dollar and Fifty Cents per annum*. Current paper, postage stamps, or gold, will be received in payment."

DR. AUSTIN FLINT says, (*N. O. Med. News and Hosp. Gazette*) in remarks following his report of 22 cases of uncomplicated pneumonia treated by him in Charity Hospital, New Orleans :

"Of the fifteen cases which ended in recovery, the treatment in none embraced bloodletting, emetics, cathartics, or other depletory measures. In no case, save one, were any depressing remedies prescribed, unless opium be so considered; and this remedy, in view of the circumstances under which it was given, can hardly be thus regarded. In the excepted case tartar emetic was given, in small doses, for a short time. Mercurial preparations were not prescribed in any case. Blisters, or other means of counter-irritation, were not employed. In the majority of cases, viz: in ten, alcoholic stimulants formed a prominent part of the treatment; that is, brandy was given in doses of one or two ounces, repeated every two, four, or six hours. In some cases, during the progress of the disease, wine or porter was substituted for brandy, when the patient expressed a preference for these articles. Opiates also entered prominently into the treatment in a majority of the cases, viz: in twelve. In these cases either from six to eight grains of opium were given during the twenty-four hours, in divided doses, or from three-fourths of a grain to a grain and a half of the sulphate of morphia within the same period. In short, the treatment was anodyne and sustaining in all the cases, save a few in which there were no indications for active treatment of any kind. The sulphate of quinia was prescribed in cases in which the patients had been affected with intermittent fever. The quantity prescribed was generally five grains three times daily. The muriate of ammonia was given in a few cases, in doses of a drachm three times daily, with a view to hastening the absorption of the inflammatory exudation. The cases, however, are too few to deduce from them any positive conclusions respecting the effect of the remedy last named. The carbonate of ammonia was prescribed in several cases as a cardiac stimulant, and upon theoretical grounds, to prevent the formation of coagula within the heart, an event which the researches of Grisolle have shown to occur oftener in this than in various other acute affections, and which seems not to have been sufficiently considered as affording an explanation of the fatal termination in a certain proportion of fatal cases of pneumonia.

"As regards diet and regimen, milk and the essence of beef, given alternately, at short intervals, formed an essential part of the sustaining treatment. Solid nutritious food, viz: meat, bread, rice and eggs, were allowed as soon as convalescence was declared. The patients were encouraged to get up as soon as they felt disposed after convalescence."

**UNIVERSITY OF MICHIGAN**—*Annual Announcement of the Departments of Medicine and Surgery, and Law, Session 1860-61.*—The University of Michigan is located in the city of Ann Arbor, on the Michigan Central Railroad. It consists of three fully organized departments, viz: Law, Medicine and Surgery, and Literature, Science and Arts; and numbers twenty-eight Professors and Assistants. During the past year it assembled 527 students. Its fund is derived from the sale of certain lands donated by Congress to the State of Michigan for the exclusive purpose of founding a University. The Professors are paid entirely from the interest of this fund, and hence no tuition or lecture fees are charged, all instruction being gratuitous. It is to be understood, however, that the object of dispensing with fees is not merely to diminish the sum total of the expenses of the student, but rather to enable him to attend a longer and more thorough course of lectures than he could otherwise afford.

Another object which the founders of the institution had in view, was to remove from the officers all pecuniary interest in the graduation of candidates, and to insure that the honors of the College shall be given on the ground of competent attainments alone.

The University Library, the Cabinet of Minerals, Medical Museum, and also the Museums of Natural History, Geology, and the Fine Arts, will at all times be accessible to members of the University.

A fee of ten dollars, to be paid on entering any department of the University, entitles the student to a *life membership* of the Institution. He may attend any number of courses of lectures, or enter any department of the University for which he is qualified, subject only to an annual tax of five dollars for incidental expenses.

*No discrimination is made between the students from this and those from other States.*

No graduation fee is required, but the actual expense of the parchment form is assessed at two dollars to each graduate.

In the medical department a fee of three dollars is also assessed for the privileges of the dissecting room to those who avail themselves of its advantages.

Rev. Henry P. Tappan, D.D., LL.D., President of the University.

*Officers and Members of the Medical Faculty.*—Zina Pitcher, M.D., Emeritus Professor of the Institutes of Medicine, Obstetrics; Abram Sager, M.D., Professor of Obstetrics and Physiology; Silas H. Douglass, M.D., Secretary, and Professor of Chemistry, Pharmacy, and Toxicology; Moses Gunn, M.D., Professor of Surgery; Samuel Denton, M.D., Professor of the Theory and Practice of Medicine, and Pathology; Alonzo B. Palmer, M.D., Dean, and Professor of Materia Medica, Therapeutics, and Diseases of Women and Children; Corydon L. Ford, M.D., Professor of Anatomy; Alfred Dubois, A.M., Assistant Professor of Chemistry; William Lewitt, M.D., Demonstrator of Anatomy.

*Admission.*—Each candidate for admission to the Medical College must be provided with satisfactory evidence of good moral character, and, if a candidate for graduation, also of such literary attainments as have been recommended by the National Medical Association, viz: "A good English Education, a knowledge of Natural Philosophy, the Elementary Mathematical Sciences, and such an acquaintance with the Ancient Languages as will enable the student to appreciate the technical language of Medicine, and read and write prescriptions."

## EXAMINATION OF ASSISTANT SURGEONS IN THE BRITISH ARMY.

[If the candidates answered *some* of these questions rationally they were very stupid. We give the questions as we find them in the *Lancet*, September.]

The new Rules for the Examination of Assistant Surgeons in the Army previous to Promotion are now in operation, and the following are the questions given to several of the senior assistant-surgeons on the 10th instant :—

## A.

1. What part do you assign to Temperature amongst the causes of disease? What are the chief diseases usually ascribed to (a) extreme heat, (b) extreme cold, (c) great and sudden changes from heat to cold, and the reverse? How would you treat those several diseases?

2. State what opinions your own observations have led you to form with respect to the effects of Diet on the health of soldiers. Discuss particularly the questions of the influence of alcohol when taken in large and in moderate quantities.

3. What are the chief diseases of the heart you have had to treat since you entered the Army? What were the symptoms of those diseases: how did you treat them; and what was the result? Enter minutely into the causes of those diseases in the men under your care. What share had the military duties in their production? State precisely any means of prevention that you could recommend.

4. Describe concisely the symptoms, post-mortem appearances, causes, treatment, and complications of dysentery.

5. What do writers mean by the term "typhus of armies?" Discuss fully the questions of diagnosis and etiology connected with this term.

6. An attack of cholera occurs in a large town close to the barracks where you are stationed. The commanding officer requests you to frame such precautionary measures as can be adopted without quitting the barracks. What would be your list of recommendations?

7. You are applied to by the Engineer Department to state how much water will be required for a hospital of 500 men; it being understood that the supply must be sufficient for cooking, washing, bathing, and cleansing sewers. At the same time, a bottle of water is submitted for your opinion as to its quality. What would you reply to the first question, and how would you judge of the second point?

8. You are required to organize a field hospital for 300 men; tents only are allowed, but these you can have in any number; no sewers can be made. How would you arrange, ventilate, and furnish the tents? How would you organize your kitchen and dispensary? And what would be your arrangements for the removal of excrementitious matters?

(To be continued.)

## BOOKS RECEIVED.

THE INSTITUTES OF MEDICINE. By Martyn Paine, A.M., M.D., LL.D., etc. Fifth Edition. New York: Harper & Brothers. 1859.

We have received this work from the publishers through A. Roman, 127 Montgomery street, who has it for sale. It is one of the most consistent, logical theoretical books we have ever seen. And, the premises being granted, it is an excellent guide to practice on the principles on which the Institutes are based.



We are sorry to see an error in the translation of an extract from Cl. Bernard; an error of vital import—"et les vaisseaux de la surface du foie plus apparents, qu'à l'état normal," cannot be rendered by "the vessels on the surface of the liver appeared in a natural state," (p. 792,) but directly the reverse: they were congested as well as those of the other organs mentioned. This seems to us to materially change the value of the experiment as an argument in favor of the theory of our author.

This book contains more facts than are often collected in any volume, and it is and forever will be worth vastly more than its cost, as a mere repository of carefully collected facts and well selected literature, independently of the value of the book as a guide to diagnosis and practice. We confidently expect to see the time when the chemist will not sneer at the vitalist, and when the vitalist will look for assistance to the chemist; and when a knowledge of both organic chemistry and vitalism will be considered essential to the rational practice of medicine.

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WE have just received the following works from the publishers, through A. Roman, bookseller, publisher and importer, 127 Montgomery street, San Francisco. Mr. Roman has all these works for sale at reasonable rates. We have no time to make any further notice of them. Blanchard & Lea are justly celebrated for publishing only such works as are worth reading. We *will* take this occasion, however, to say, that the sooner physicians purchase and read "Todd on Acute Diseases," the better it will be for their patients and their own reputation and self-confidence. In this compact terse, logical, rational work, Dr. Todd talks "as a man talketh unto his friend." It possesses a peculiar and melancholy interest in being the last gift of the great observer to the profession he so much loved in life. In him rational medicine lost its most powerful and convincing champion. Not lost, for he still lives in his immortal labors. We shall notice all these works more at length hereafter:

**A PRACTICAL TREATISE ON FRACTURES AND DISLOCATIONS.** By Frank Hastings Hamilton, M.D., Professor of Surgery in the University of Buffalo; Surgeon to the Buffalo Hospital of the Sisters of Charity; Consulting Surgeon to the Buffalo General Hospital, and to the Buffalo City Dispensary. Illustrated with two hundred and eighty-nine wood cuts. Philadelphia: Blanchard & Lea. 1860.

**THE DISEASES OF THE EAR: THEIR NATURE, DIAGNOSIS, AND TREATMENT.** By Joseph Toynbee, F.R.S., Fellow of the Royal College of Surgeons of England, etc., etc. With one hundred engravings on wood. Philadelphia: Blanchard & Lea. 1860.

**CLINICAL LECTURES ON CERTAIN ACUTE DISEASES.** By Robert Bentley Todd, M.D., F.R.S., Author of "Lectures on Diseases of the Urinary Organs," etc.; Formerly Physician, now Consulting Physician, to King's College Hospital, London. Philadelphia: Blanchard & Lea. 1860.

**LECTURES ON THE DISEASES OF INFANCY AND CHILDHOOD.** By Charles West, M.D., Author of "Lectures on the Diseases of Women," etc., etc. Third American, from the fourth revised and enlarged London Edition. Philadelphia: Blanchard & Lea. 1860.

[COMMUNICATION FROM WM. H. KEITH &amp; Co.]

## TO PHYSICIANS.

THE undersigned desire to call the attention of the medical profession to a new preparation manufactured from *Cinchona Bark*, and which, after ten years' trial in the French hospitals, has been admitted into the Codex of the "Academy of Medicine" on the acceptance of the reports of MM. Delondre and Bouchadat, (see *Revue Therapeutique Medico-Chirurgicale*, May, 1858.) The high price and scarcity of the South American *Cinchona* and the consequent difficulty of obtaining sufficient supplies of a reliable sulphate of quinine have induced physicians to recommend again the use of the powdered bark of all kinds of *Cinchona*, which contains both Quinine and Cinchonine; but the powder is always uncertain in its operation from the variable proportion of the alkaloids which it contains.

To obviate this inconvenience MM. Delondre and Bouchadat prepared an extract faithfully representing all the useful principles of *Cinchona*, and on the recommendation of the "Academy of Medicine," the French Minister of Agriculture and Commerce approved the formula for the composition of this extract, which is called *Quinium*,\* consisting chiefly of the quinine and cinchonine of the bark, together with their associate alkaloids, (quinine and cinchonine,) divested by the process of manipulation of the useless organic acids present in its native state. In the manufacture of the quinium, we have followed the course advised by M. Delondre, and use a true Calisaya bark, thus producing a compound in which the two alkaloids, quinine and cinchonine, exist in the proportion of two of the former to one of the latter, seventy-two grains of the quinium giving by analysis sixteen grains of quinine and eight grains of cinchonine. The quinium may be given either in pills or wine, the *maximum dose* being one hundred and sixty grains. The wine (as made by ourselves after the original formula) contains in one fluid ounce ten grains of quinium, and may be given in doses of one to two tablespoonsful three times a day. The pills containing in each two grains of quinium may be given in doses of two or three a day, as a tonic and febrifuge. (It is recommended that a small quantity of wine be taken after each pill.)

We also desire to call attention to the following, from *Pacific Medical and Surgical Journal*, (March, 1860,) in relation to our preparation of Monsel's Salt :

\* It is to M. Delondre, (known by his nom de plume of A. Labarraque,) that Europe is indebted to the employment of sulphate of quinine in the treatment of intermittents, and we hailed with pleasure the announcement that he had succeeded in presenting cinchona bark in a more favorable position as a remedial agent, than ever before. We refer to his extract made from cinchona bark, which he presented to the consideration of the Academy of Medicine.

Quinium is a compound representing cinchona bark, divested of all inert matter which serves only to oppress the digestive organs and retard the action of the alkaloids. \* \* \* \* The numerous traits of quinium by M. Delondre in France, and MM. Laveran and Wahn in Algeria, have furnished most happy results, and fully established its claims as an agent of great therapeutic value. The difference between the utility of quinium and the sulphate of quinine is shown in a forcible manner by M. Delondre, he considering that "though the sulphate of quinine is still invaluable in its power of cutting short the paroxysms of a recent intermittent fever, the quinium for the treatment of a chronic fever is possessed of superior power, and that in fever countries, in the midst of the endemic causes which give rise to intermittents, the advantages of quinium is remarkably manifest"—[*Journal de Clinique Medicale de Pharmacie et de Toxicologie*, March, 1858.]

## PROF. JEWETT ON MONSEL'S SALT.

"In July last we received from Professor P. A. Jewett, of New Haven, (Yale Medical College,) a request that we would furnish him a specimen of this remedy, as he had found none that would answer the indications ascribed to its use, as set forth in this journal. (We do not wonder at the fact if the article received here is a sample of all that has issued from Eastern manufacturers.) We immediately placed this order in the hands of Wm. H. Keith & Co. to fill, as we knew that the remedy was made strictly by the original formula by this house as given by us in the February number (1858) of this Journal, and from which they have never deviated. It is very doubtful if any innovation on this formula can improve the remedy, and any other formula purporting to originate from others should be regarded with mistrust, having origin in profound ignorance or impudent pretension. Made by the original formula, it has never been known to fail in its indications, and we can recommend no other. After a trial of seven months, Prof. Jewett writes as follows of the effect of the remedy. We extract his remarks from a private letter to us, bearing date February 3d, 1860:

"DEAR DR.:—Your letter with the salt should have been answered some time since, but I have delayed partly for the purpose of being able to give you my experience with it, and partly because I had forgotten all about it. The salt came in good order. I have occasion to use it frequently, and have never been disappointed in the result. I have used it in several cases after the extirpation of tumors about the anus, in several cases of wounds of the arteries, such as the radical, the palmer arch, the temporal, and in one case of a tumor from the inside of the cheek. I have used it freely as a local application to recent chancre with the best effect. I consider it one of the most valuable articles for the purpose intended we have.

J. B. TRASK."

Care must be exercised in the preservation of this salt, as it is easily dehydrated, under certain conditions. When the bottles containing the salt are kept tightly closed, protected from the light and in a *cool, dry* situation, no fears need be entertained of its efficacy.

The salt, as made by ourselves, possesses absolute transparency, and is of a topaz brown (or light puce) color.

WM. H. KEITH & Co.,  
137 Montgomery Street.

# THE Pacific Medical and Surgical Journal.

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## Selections.

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From the Southern Medical and Surgical Journal

### Therapeutic Effects of Ammonia as a Dermic Agent in the Treatment of Disease.

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BX JOHN GRANTHAM, F.R.C.S.

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THE importance of the skin in the function of assimilation in nutrition is powerfully shown by Erasmus Wilson, who says: "I counted the perspiratory pores on the palm of the hand, and found 3528 in a square inch; now each of these pores being the aperture of a little tube of about a quarter of an inch long, it follows that in a square inch of skin on the palm of the hand there exists a length of tube equal to 882 inches, or 73 feet!" Surely, such an amount of drainage as seventy-three feet in every square inch of skin, assuming this to be the average for the whole body, is something wonderful; and the thought naturally intrudes itself—What if this drainage were obstructed? The number of square inches of surface in a man of ordinary height and bulk is about 2500; the number of pores, therefore, is 8,820,000; and the number of inches of perspiratory tube is 2,205,000; that is, 183,750 feet, or 61,250 yards; or nearly thirty-four miles! Of the fact of absorption by the skin, it has, by many physiologists, been fully proved, that after bathing in infusions of madder, rhubarb and turmeric, the urine has been found tinged by these substances; it is also proved, that imbibition takes place in the skin according to the physical laws, in conformity with which they pass most readily into the vessels which present the thinnest walls and the largest surface. Excepting the notice taken of ammonia, being the principal agent in the Buxton waters, by Dr. Bradley, I am of opinion that no writer has

given it the important position it merits, when combined with hot water as a dermic agent in the treatment of congestive diseases.

As far back as the year 1828, I remember a neighboring practitioner, Mr. Hurst, of Dartford, sponging the skin in some cases of scarlet fever, with tepid water containing a few drachms of the spt. ammoniæ aromaticus; since which time I have frequently used the ammonia in a much more potent form, viz: liquor ammoniæ fortior, one ounce and a half to two quarts of hot water, at 120° of heat, as a sponging bath;—and as a general bath, the same quantity of ammonia in water, at 100° of heat. To render this statement more intelligible, I will relate some examples. Firstly, an extreme case of severe purpura hemorrhagica. At the onset of the case, the patient was suffering from continuous bleeding from a decayed tooth, which tooth was immediately removed; still the bleeding continued from another decayed tooth; that, and a third, were taken out; it now became evident that the bleeding oozed from the whole surface of the mouth, resisting the application of the nitrate of silver, matico, zinc, alum, etc., then a further loss of blood from the kidneys and intestines occurred, with an eruption of maculæ on the skin, of a dark purple color; these effects continued to an alarming extent, until I adopted the sponging of the skin with two ounces of strong ammonia, in two quarts of hot water, over the chest, body and extremities: after this ammonia fomentation, the skin was dried, and then rubbed over with hot lard, and the chest and abdomen were covered with wool; from that time the nervous system became tranquil, and the exudation of blood gradually ceased; and with the internal administration of quinine, opium, milk, and beef-tea, etc., the patient in time became convalescent. This narrative being only written from memory, precludes my entering into particulars; nevertheless, it serves to prove the power of ammonia when so applied, as a compensatory measure. I am also of opinion that the inhalation of ammonia gives a stimulus to the change of the blood as it passes over the air-cells of the lungs, and may assist the vital law of generating animal heat. Secondly, in a case of scarlet fever, when the patient was delirious, the skin of a dark red color, and the body slightly tympanitic, the ammonia bath when so applied, at 120° of heat, bore unmistakeable evidence of its salutary effects in quieting the nervous system, procuring sleep and abating nausea. Thirdly, a case of stridulous breathing in a child three years old, yielded to the effects of the ammonia bath, at 100° to the chest, and the after application of hot lard and wool to protect the animal heat and keep up the action of the sudoriferous function. Lastly, the ammonia bath at 90° as a sponging bath in the morning, I have known to be very beneficial to the anæmic patient.

I trust that by this statement I am not advocating a particular for a universal; but simply proposing a means of treatment which may be advantageously adopted in the management of fever, particularly in the congestive or comatose forms.

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**CHLORIDE OF ZINC MOULDED INTO STICKS FOR THE PURPOSE OF CAUTERIZATION.**—Soften gutta-percha in boiling alcohol, and incorporate it with finely-pulverized chloride of lime, in a warm porcelain mortar, taking equal parts of each. Then roll rapidly on a porphyry slab, to the diameter of a quill, and divide in fragments, each of which shall be pointed at one end. Keep these in a wide-mouthed bottle in powdered lime. These sticks remain perfectly hard, are easily handled, cauterize with great regularity, and act as a sponge through which the chloride will slowly exude, becoming liquid by the action of the air and the skin.—*Lancet*.

From the Philadelphia Medical and Surgical Reporter.

### The Use of Arsenic in Dyspepsia.

DOCTOR V. Germain, de Chateau Thierry, has recently laid before the Academy of Medicine in France, a memoir on the treatment of dyspepsia by arsenious acid, which is published in a recent number of the *Gazette Hebdomadaire*.

In looking over the chemical analyses of the mineral waters most celebrated for the cure of dyspepsia, Dr. Germain found that all, whose efficiency had been proven, contained traces of arsenic, and he arrived, after a careful examination of the matter, at the following conclusions :

1. While mineral waters are efficacious, those artificially prepared are without medical virtue.

2. The mineral waters cure various affections, but these cures are only secondary. Their first effect is an amelioration of the general health, following a restoration of the appetite, and of a good, sound sleep. The general system thus improved rids itself somehow, spontaneously, of the disease with which it was affected.

3. None of the substances held in solution in the mineral waters, if not iodine or iron, is capable of modifying the general health; and these two substances, administered pharmaceutically, do not produce the good effects of mineral waters, of which they form a natural constituent.

From these conclusions Dr. G. drew the further reference, that the inefficiency of the artificial mineral waters was owing to the absence of the arsenic, which in the analysis of natural waters is indicated as being present in traces; and that in the latter it was the arsenic, with its powerful tonic qualities, that restored the general health, cured the dyspepsia, and in that way removed a great many of those chronic ills for which those in easy circumstances seek and find relief at watering places.

Acting upon this theory, Dr. G. commenced to treat his chronic cases, in which dyspepsia played a principal role, with arsenic, in very small doses, and judging from his results, with the most happy effects. In the memoir, he adduces 18 cases of severe suffering, chronic ailments, with dyspepsia, which were readily and effectually cured or relieved by this treatment, which we certainly consider worthy the attention of the profession.

**BLOODLESS OPERATION FOR CLEFT PALATE.**—It may be recollected that M. Cloquet published in 1855 an essay on a method of applying cauterization to the abnormal cleavage of certain organs, and that cases were therein mentioned in which union of the margins of the cleft had been obtained by repeated cauterizations. At the meeting of the Academy of Sciences of Paris of the 21st of May, M. Cloquet brought forward a case treated by Prof. Benoit, of Montpellier. The child was eleven years old; the soft palate was completely cleft, and all the usual symptoms were present. The treatment lasted nineteen months, with two rather long interruptions. The whole cleft has now united, save that of the uvula, and this result was obtained by 33 cauterizations, 14 with the acid nitrate of mercury, and 19 with the solid nitrate of silver. A slight nasal pronunciation still exists, being the result of habit. M. Benoit means to apply the same treatment to the uvula.—*Lancet*.

From the North American Medico-Chirurgical Review.

## Pathological Anatomy.

BY JOHN H. PACKARD, M. D., OF PHILADELPHIA.

### *Contributions to the Pathological Anatomy of the Spinal Cord.*

By PROFESSOR VON LENHOSSEK, of Pesth.

PROFESSOR VON LENHOSSEK bases his pathological views upon examinations of three hundred and twenty-two bodies, conducted by him within the space of seven years. It would be well if all reporters of autopsies could say as he does: "I present in the following paper only such pathological observations as are adapted to the proof or elucidation of definite morbid processes, and correspond to the most evident phenomena of disease during life; carefully excluding everything which could be regarded as of post-mortem occurrence, or as due to the method of investigation."

#### *A. Membranes of the Cord.*

(a) *Arachnoid*.—(1) *Exudation*.—The author has three times seen exudations of lymph, gluing together the two layers of the membrane; in each case it was in the cervical region, and in two of the instances there was no hyperæmia of the membranes. (2) *Formations of bone and cartilage*.—These occupy the visceral layer, generally at the lumbar enlargement of the cord, and do not seem to be always traceable to inflammation. When bone forms, it begins at the centre of a plate of cartilage. Microscopically, this "cartilage" consists of coarse fibres; the bone resembles other osteophytes. (3) *Subarachnoidal effusion*.—This is rare, and usually of small extent; it was often observed in the victims of an epidemic of scarlatina, which prevailed in Klausenburg in the beginning of 1857. (4) *Subarachnoidal extravasation (of blood)*.—Three cases of this are mentioned; one where suicide by hanging had been committed, a vein in the pia mater, at the lumbar region, having burst; one at the pons Varolii of a man aged sixty-two, who died of a capillary apoplexy; and one in a man aged forty-seven, in whom the fourth cerebral ventricle was distended with blood, and the arachnoid, from the calamus scriptorius to the root of the third spinal nerve, was raised up and infiltrated.

(b) *Pia Mater*.—(1) *Sclerosis*.—Thickening of the pia mater is quite commonly met with, and depends upon the formation of very irregularly arranged fibres, imbedded in which lie amorphous, yellowish-brown, molecular masses, regarded by Wedl as albuminous exudates. (2) *Pigment-formation*.—This is always abnormal, and occurs usually about the pons Varolii and medulla oblongata. (3) *Hyperæmia*.—This is most common at the lower portion of the cord, in hanged persons, and those dead of typhus, or of puerperal affections, or after traumatic inflammation of the membrane in ques ion. (4) *Thromboses*.—Usually seen in the anterior vein or sinus; but this condition may affect the posterior. It is often associated with the preceding state. The occluding plug is commonly an amorphous, greenish mass, mixed with fibrinous clot. (5) *Obliteration of the anterior spinal artery*.—Once observed by the author at the decussation of the corpora pyramidalia, and twice at the cervical enlargement of the cord. The walls of the affected vessels seemed unaltered; in two cases there was roughening of the bicuspid and aortic semilunar valves, with enlargement and superficial softening at

some portion of the valvular apparatus. (6) *Corpora amylacea*.—These bodies were most frequently found attached to the fibrous texture of the membrane, at the base of the brain.

### *B. Spinal Cord and Medulla Oblongata.*

(1) *Dilatation of the Central Canal of the Spinal Marrow*.—Professor Lenhossek has never seen this canal closed, as described by Virchow. It is enlarged in cases of congenital dropsy of the ventricles, and especially in cases of failure of development of the brain. In adults the dilatation is often associated with gray softening; it is always but partial in extent. The dilated portion may be filled with fluid, rendered cloudy by epithelium detached and floating in it.

(2) *Formation of the Anterior Fissure into a Canal*.—This curious alteration of form can only be clearly understood by reference to the relation of the pia mater to this surface of the cord, dipping down between the two anterior columns. The adhesions which form between the two opposing faces of the membrane are never of great extent, but there are often several of them.

(3) *Atrophy*.—This often occurs as a senile change. It is apt to affect only a part of the cord, which thus assumes a knotty aspect; the pia mater becomes thickened at the spot. The color of the cord changes to a dirty gray, and its consistence is greatly increased. No change is observed under the microscope, except hypertrophy of the fibrous tissue of the pia mater; but chemical reagents show a decided diminution in the fatty matters of the cord.

Atrophy of the medulla oblongata has been seen by Professor Lenhossek, but never without other alterations. When both corpora pyramidalia are affected, the roots of the hypoglossal nerves are involved so as to cause hindrance or total loss of speech.

(4) *Fatty Deposit*.—This may affect the small vessels, oftener in the brain and spinal cord than in the medulla oblongata. It never occurs alone, but always along with gray softening, inflammation, or changes consequent upon apoplexy; capillary apoplexy may be due to it, as has been shown by Paget and Wedl.

Fatty change of the gray or white substance is met with at the seat of old apoplectic effusion, in the course of meningitis, or in connection with gray softening. Its manifestations are rendered very complex by the intricate manner in which the nerves are distributed. It is shown locally by the discoloration and singular firmness of the affected part, and by the greasy layer which appears on a knife-blade used in making sections of it; microscopically examined, the tubes are seen broken up or replaced by the granular cells pointed out by Turck. Colloid and amyloid bodies are observed in the gray substance, which is always secondarily affected, never primarily.

(5) *Softening*.—This is difficult of study, since it never occurs by itself, and is often, according to Engel, always due to post-mortem change. It does not keep pace with the putrifaction of the other soft parts; but sometimes, especially after repeated congestions of the brain, as in typhus fever, after apoplectic effusions, after suppurations of the muscles attached to the vertebræ, etc., it is very marked.

(a) *White softening* is the constant consequence of serous infiltration, and is always attended with swelling of the affected portion; if the white substance is attacked, it becomes creamy; if the gray, its color becomes paler. Softening of the cord is often limited to a small portion. When it is secondary to inflammatory exudation from meningitis, the pia mater cannot be stripped cleanly off from the surface of the cord.

(b) *Grayish-red softening* is due to long-continued local diseases, terminating in death; such as chronic myelitis, repeated capillary or other



apoplexy, caries of the vertebræ, or, as observed by Oppolzer, the development of an echinococcus. Its limited extent distinguishes it from the results of post-mortem change.

(c) *Dirty-gray or granular softening* may attack the cord, the medulla oblongata, or the pons Varolii. It has no red tinge whatever; it always involves the whole extent of the affected part, and is attended with enlargement. Alcohol hardens the tissue so softened. This form of disease is apt to be met with in idiocy of a marked grade.

(d) The so-called *red softening* is always of small extent, and is the consequence of capillary apoplexy, the effused blood remaining fluid, and coloring the medullary substance by soaking into it. The *yellow softening* is, according to Forster, an advanced stage of this variety.

(6) *Sclerosis*.—This is rare, always of small extent, apt to occur at several points; it is sometimes seen in the young. Its cause is unknown; it consists in a substitution of tangled fibrous tissue for the substance of the cord.

(7) *Hyperæmia*.—This often attacks the pia mater and cord at once. It may assume the form of (a) varicosities of the veins outside of the cord or medulla oblongata; in connection with the latter they have been thought, by Van der Kolk, to be constant in cases of epilepsy; (b) pouching of the veins within the medullary substance; (c) aneurismal distentions of the capillaries; (d) apoplexy, which is very rare in the pons Varolii, and still rarer in the cord, except as the result of an injury.

(8) *Exudations*.—These present themselves as rounded, irregularly-placed masses, of brilliant whiteness and variable size, easily cut, but differing from colloid or amyloid bodies. They are only in exceptional cases associated with fatty change or with gray softening of the cord; and differ materially from the bodies described by Gluge as inflammation-corpuscles, and by Henle, Vogel, and Gerber, as exudation-corpuscles.

(9) *Tubercle*.—Ollivier saw tubercle several times in the pons Varolii, and others have seen it in the medulla oblongata and the spinal cord.

(10) *Amyloid bodies* are, according to Professor Lenhossek, always attached to outgrowths of the fibrous texture of the pia mater, especially in sclerosis or senile atrophy of that membrane.

(11) *Colloid deposits* are seen at the seat of old apoplectic effusion, and in old people, according to Wedl, without any trace of casual disease. Professor Lenhossek has seen them, in a case of medullary carcinoma, both within and without the substance of the cord.

(12) *Fissuring* of the cord has been nine times seen by the author; in seven cases it was at the anterior surface, in two at the posterior. It seemed to be connected with grayish-red softening of the tissue, and the subjects had been habitually dissipated; the youngest was thirty-five, the oldest sixty-five years of age. The nerves given off at the seat of the disease were atrophied in three of the cases.

(13) *Fibrous Cancer* was presented in the case of a female gipsy, fifty years old. It formed an oval, grayish, jelly-like mass within the substance of the cord, reaching from the third to the fifth nerve; and was composed of fibres, colloid masses, and fibre-forming cells.—(*Ausserordentliche Beilage zum fünfsten Jahrgang der Oesterreiche Zeitschrift für Praktische Heilkunde*.)

REMEDY FOR CHRONIC ALCOHOLISM.—Oxide of zinc has the remarkable property of restoring to health, or, at all events, of greatly relieving the disordered nervous system of persons suffering from chronic alcoholism, no matter whether the prominent symptoms are sleeplessness, hallucinations, trembling, or any other.—*Druggists' Circular*.

From the Philadelphia Medical and Surgical Reporter.

### European Correspondence.

Dublin—Its Institutions—St. Vincent's Hospital—University of Dublin—Trinity College—Museum—Curious Specimen of Transformation of Joints into Bone—Library.

Cork, August 19th, 1860.

#### *Editors of Medical and Surgical Reporter :*

GENTLEMEN :—When in Dublin a few days ago, I took the opportunity of visiting the University and one of the Hospitals. Of the latter there are several. Stevens' Hospital, Royal Hospital, St. Vincent's, a Military Hospital, and the Hospital connected with the Workhouse, or as it is often called here, the "Union."

The only one which I found time to visit was St. Vincent's in Stevens' Green. It is, I believe, not quite as large as Stevens' Hospital, but it is considered to be one of the best managed in Dublin. The building which composes it was at one time the residence of the Countess of Neath, who gave it for the purpose to which it is now applied. Additions have, however, been made, and it is now capable of accommodating nearly 100 patients. This seems a small number compared with those contained by the Hospitals in London and Paris, but it is necessary to bear in mind that the chief city in Ireland contains only about one-tenth of the population of London, or not quite half that of Philadelphia. Indications of the original use to which the building was put, can be discovered in the carved wood work about the rooms and in the ornamented ceilings, also in the size of the wards, in each of which only six or eight patients can be accommodated. In the new portions of the building, however, the arrangements are very similar to those of most of the other institutions which I have visited, the wards being long and narrow.

St. Vincent's Hospital is in the hands of the Roman Catholics, and is supported entirely by voluntary contributions. The nurses are all nuns, and one of them showed me around the house. There are no residents, but three attending physicians, who pay a visit twice daily, and are sent for in any emergency. Each of these physicians pays a visit twice weekly, accompanied by students. There is an operating room capable of containing about eighty persons. Every thing appeared to be very neat and clean, and the nun who showed me around seemed to take an interest in pointing out what was worthy of observation. I was, however, sorry not to have seen some one of the physicians or surgeons, none of whom happened to be in at the time of my visit.

I was very much interested in my visit to Trinity College, otherwise called the University of Dublin; this University only containing the one College. There is in Ireland one other University called Queen's University, and this consists of three Colleges, one at Cork, one at Glasgow, and one at Belfast.

In Trinity College there is taught Law, Medicine, and Divinity, besides the usual studies of the Department of Arts. The College was founded by Queen Elizabeth, and there is a picture of her hanging in either the dining hall or the hall for examination, I forget which. In both of these rooms there is a number of portraits of Professors or Patrons of the University.

In the Medical Department I visited the Museum, the Dissecting Room, and the Laboratory. Dr. Apjohn is the Professor of Chemistry, and occupies the same chair also in the Department of Arts. The duties of one of the chairs require him to lecture three times weekly, and of the other, four

times weekly. There are also two laboratories and two lecture rooms, one for each of the departments. Each laboratory was apparently amply supplied with apparatus.

In the Museum there was a skeleton of a giant eight feet six inches high, but although the height was so great and the chest was splendidly developed, the cavity of the cranium was not, I was informed, larger than the average, and certainly on a cursory view, it did not strike me as being equal to the average. The most remarkable thing, however, which I saw in the Museum, was the skeleton of a man, all of whose joints had become ossified, with the sole exception of those of the phalanges, and of one wrist. Even the neck was perfectly immovable, as could be readily seen, for there was a mass of bone extending from the occipital ridge to the dorsal vertebræ, showing that the tendons of several of the muscles of the back, or rather the muscles themselves, had been converted into bone. The microscopical examination of this new formation revealed, I was informed, all the characteristics of bone, showing that it was not merely a deposit of osseous matter, but an actual conversion into bone.

Who, at first sight, if asked whether he would have preferred to have had his lot cast in the condition of this poor creature, half turned into bone, so that he could be seized by the feet and held out horizontally, without the least bending, or in that of the Irish Giant of eight and a half feet, would not prefer the latter, and yet this giant died at the early age of twenty-five, while the other lived for about a century, and enjoyed life even to the last; for with his one moveable wrist he managed to play cards, even without any other part of his body being of any use to him.

One of the curiosities of the Museum is the series of wax models, (or as they call them here, wax works,) which were made in France two hundred years ago. Some of them are still very good, or perhaps I should content myself with saying *some parts* of some of them, for they are falling to pieces. Of course, however, they never were to be compared to those beautiful models made in modern times by Messrs. Towne & Tuson.

The pile of buildings which forms Trinity College is quite extensive. A new and very handsome edifice has just been completed, which is intended to contain the Museum, and some Lecture Rooms.

I visited the Library, which contains about 100,000 volumes, among which are many valuable manuscripts; also the Chapel, in which is an old organ, said to have been brought over in the Spanish Armada. But I find I am running off from the proper subjects of my letter into non-medical matters, for which I refer you to the Guide Books for further information. Hoping that before long I may be enabled to send you a more interesting letter, I remain,

Very truly, yours,

M. D., ABROAD.

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*From the American Medical Times.*

LETTER FROM DAVID P. SMITH, M. D.

EDINBURGH, Scotland, August 6, 1860.

LEAVING the steamship Arabia Saturday noon, at Liverpool, I made the best of my way to Edinburgh, where I arrived Saturday night, August 4th. Placing my professional duties foremost, I, this morning, called upon Dr. Wm. Husband, who has recently practised and advocated vaccination upon a new, simple, and very efficient plan. He received me with the utmost kindness, and, in the course of our conversation, instructed me fully in his new method, which is simply this:—On or before the eighth day after a suc-

cessful vaccination, by slightly rupturing the vessel, and dipping therein a delicate capillary glass tube, virus sufficient to vaccinate several people ascends into the tube by virtue of the capillary attraction; then withdrawing the tube and slightly shaking it, so that the virus may be brought into the middle, both ends are, in succession, hermetically sealed by being held in the flame of a candle until the end melting assumes a globular form. This process is all that is necessary to be done to procure and preserve the virus. When about to use it, all that is required is to break off both ends of the tube, and, slightly abrading the arm in one, two, or three places, to blow upon these surfaces a drop or two of the fluid. Can any process be more neat or simple? Dr. Husband assures me that nine out of every ten vaccinations "take," and that having employed tubes that were charged two years ago, their efficiency remains unimpaired. The tubes used are very fine and about three inches long.

Riding to the Royal Infirmary at 12, I there saw Prof. Syme. On being shown a case of ununited fracture of the humerus, I called the attention of the Professor to the views of Prof. F. H. Hamilton, as to the cause and treatment of that complication of fracture when occurring in the humerus. They are briefly this:—That the cause of the non-union is temporary the ankylosis of the elbow-joint, which, occurring when the arm is in a bent position, causes much, but hitherto unsuspected, motion at the seat of fracture, and that the treatment should be to straighten the arm and apply to it a straight splint extending from the shoulder to the tips of the fingers; and then perform any operation at the seat of fracture that may be thought necessary. Prof. Syme also showed us a patient who, when suffering from popliteal aneurism, had pressure faithfully tried without any result, in Manchester. The femoral artery was then tied with the effect of curing the aneurism. Some time after this, and subsequently to a severe blow upon the knee, the foot began to mortify, and finally dropped off in the line of Chopart's operation. At this time Prof. Syme amputated at the ankle-joint, and, as he said, contrary to his anticipations, the stump was nearly healed. Remarking upon fractures, and the American method of making extension, and sometimes both extension and counter-extension by means of adhesive plaster, Prof. Syme maintained stoutly that the benefit supposed to be gained from the use of extension, was an entire delusion; for if extension was employed, the muscles were roused to resistance and always overcame such force;—I ventured to suggest that, in our country, it had been found that extension, judiciously used and carefully applied, was of great value, and that his prejudices against its use arose from seeing it improperly and rudely applied. It was, however, evidently a foregone conclusion in his mind, and all argument in its favor was useless.

I spent much of the day, and also dined with Professor Simpson. I was struck with the great activity of his mind, and the ease with which, in almost one breath, he would discuss subjects entirely opposite. His geniality and, as it were, playfulness of mind, together with his great kindness to strangers, render his hospitalities delightful. He was much interested in an account that I gave him of the improvements in the treatment of morbus coxarius in our country. I shall take an early opportunity to show the Professors here Dr. Sayre's instrument. It appeared to me to be such a marked improvement, when I saw it at the National Medical Association, and heard it so ably commented upon, that I procured it, and have it with me. Professor Simpson kindly showed me his method of performing acupressure. He takes a needle threaded with a wire, and, deeply imbedding it in the tissues on one side of the artery, makes its point issue so that it may pass above the artery, and then thrusting it down deeply into the tissues on the other side of the vessel, it appears to be able to control perfectly vessels of any size. He remarked that it had been used in several amputations of the thigh with

perfect success. The wire is used merely to draw out the needle when it has remained a sufficient length of time—24 hours have sufficed. What time or rather about what time the needle should remain has yet to be determined. A case was shown me where Prof. Simpson had performed the operation for vesico-vaginal fistula, the day previous. He remarked that he had eleven cases in which he had performed only eleven operations with perfect success in all. A case presented itself of nasal polypi, interesting from the fact that it had been in existence for 24 years. The gentlemen told me that Mr. Liston had operated upon him some fifteen times, twenty years ago, causing much hemorrhage and loosening one of his molar teeth. The growth remaining and increasing, about four years ago he applied to Prof. Syme, who removed it several times, and, as the growth immediately returned, advised him to let it alone. He did so, and at the present time it is much less than four years ago, although plainly perceptible on distending both nostrils. He carries constantly in his pocket a vial of copperas dissolved in water, which by causing contraction of the mass relieves him materially. Prof. Simpson suggested the application of chloride of zinc.

At the Infirmary, to-day, Prof. Syme remarked that there had recently been two cases of aneurism admitted to the Infirmary for operation, in which pulsation ceased the day after their admission, and prompt recovery followed without anything being done. He attributed it to the fright and anxiety consequent on the journey and admission to the hospital, which might have caused some mechanical or other change in the aneurism. He considered the treatment by flexion well worthy of trial in almost every case. Prof. Syme remarked that blistering was the very best thing that could be done for a callous, indolent ulcer; and he wished particularly the credit of urging this improved treatment upon the profession. A poultice is usually applied for the first twenty-four hours after admission to the hospital; then the blister. I noticed in the wards that fractures of the tibia and fibula were all laid upon the outer side. My attention has been called by Mr. Edwards, formerly Demonstrator of Anatomy in the University, to the subject of fractures of the radius just above the wrist. It appears to him, and certainly does to me, after experiments upon the dead body, that far too much importance has been attached to the forcible bending of the hand downwards, and to the ulnar side. Any one who tries the experiment upon the subject will find that it really prevents the close apposition of the fractured surfaces. A gap is produced whenever the hand is forcibly inclined in the usual manner. May not the filling up of this gap with new deposit in some way help to produce that stiffness and awkwardness of the joint that so often remain for months. I remember that Prof. F. H. Hamilton, in his late excellent work on fractures, doubts very much the efficacy of the above-mentioned posture, and, if I mistake not, retains it merely on account of the superior facility that it gives you for examining the point of fracture.

Many operations are daily performed at the hospital, or, as it is called here, Royal Infirmary, that I do not mention, because they present nothing of interest. Warm water is used here instead of cold, as an application to wounds, sprains, and contusions. Prof. Simpson remarked to me that he doubted the propriety of employing even warm water as an application to a surgical wound. He thought it might dissolve the crust or glazing formed over a wound, and thus do more harm than good. Prof. Syme amputated the leg by making anterior and posterior skin-flaps, and dividing the muscles by circular incision. In sawing the bone, he divides the spine of the tibia obliquely, so as to prevent fretting of the anterior flap by the sharp corner. This, however, is no novelty.

DR. M. S. BUC ANAN, Professor in the University of Glasgow, died on the 5th of June.

From the London Lancet.

## Examination of Assistant-Surgeons in the British Army.

[Continued from page 369, and concluded.]

### B.

1. Describe the operation of resection of the elbow-joint; and briefly the chief cases of injury and disease for which it is appropriate.

2. What regulations have you seen enforced for the prevention or diminution of venereal disease among soldiers? If they have been unsatisfactory, how would you improve them?

3. What are the most frequent complications that arise during an acute gonorrhœa? Name not less than five: describe them, and state the best means for their prevention and cure.

4. For what injury in the lower extremity produced by musket-balls, and for what consequences of such injuries, would you amputate, supposing the patients to be previously healthy soldiers?

5. In cases of punctured wounds of limbs, from which blood is no longer flowing, what would lead you to believe that a principal artery is wounded? In such a belief what would you do?

6. Write the articles, and quantities of each, contained in the "low diet," "half diet," and "entire diet" of the hospital regulations.

7. State the best means for detecting the deceptions of those who pretend blindness either of one or both eyes, or deafness of one or both ears, or stiffness of a joint (say the elbow,) or paralysis of an arm or leg.

8. A man is found insensible; how would you ascertain whether the insensibility be due to injury of the head, drunkenness, apoplexy, poisoning with opium, or exhaustion through want of food?

9. Describe the characters and tests of the following deposits in urine: lithic acid, triple phosphate, oxalate of lime, mucus, pus.

### C.

1. Describe in their proper order, as displayed in dissection, the parts situated on the anterior aspect of the forearm, including the bend of the elbow.

2. Describe the parts concerned in femoral hernia, and the anatomical conditions distinctive of that form of rupture.

3. Describe the minute anatomy and the functions of the kidney, noticing the sources whence the principal elements contained in its secretion are derived.

4. Describe the membranous portion of the male urethra, its form, relations, and structure.

5. From what parts of what kinds of plants is quinine procured? Describe, in general terms, the method of extracting the alkaloid; mention the plants that afford the best substitutes for quinine.

6. Enumerate the principal entozoa which infest the human subject, and state what you know of their habits.

7. Which is most nutritious: rice-flour, or pea-flour? Upon what do their relative qualities as articles of diet depend?

8. Enumerate the principal animal and vegetable oils; state the sources whence they proceed; and distinguish the volatile, fixed, and irritant?

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QUESTIONS AT THE COMPETITIVE EXAMINATION FOR THE APPOINTMENT OF  
ASSISTANT-SURGEON IN THE INDIAN ARMY.—JULY, 1860.

### NATURAL HISTORY AND BOTANY.

BY DR. HOOKER.

1. What are the botanical characters and properties most prevalent in the natural orders Laurinæ, Rosacæ, and Cucurbitacæ? Give examples of the latter used in medicine.
2. Enumerate the principal vegetable narcotics, the plants that produce them, and the countries they come from, and classify them according to their therapeutic actions.
3. In what form are the following imported, and how would you distinguish good from bad samples of each:—Ipecacuanha, rhubarb, sarsaparilla, borax, nitre, antimony?
4. Describe the structure of a dyacotyledonous seed, and indicate the relation of its several parts to the seed vessel.
5. Describe the structure of the trunk of a monocotyledonous plant.
6. Define the term hypogynous, perigynous, epigynous, thalamifloral, calycifloral, and carotifloral.
7. Of what parts does a grain of wheat consist; what is the minute structure of its contents, and what are its chemical constituents?
8. On what do the peculiar values of milk and eggs depend as articles of food?
9. Contrast the structure of the brain in the higher and lower mammals.
10. Describe the respiratory apparatus in birds, reptiles, and fishes.
11. What parts of what animals produce silk, catgut, silk-worm gut, whalebone, and isinglass?
12. Give, accurately and tersely, the meanings of the following words:—Biology, organism, type, diagram, axis, affinity, analogy, homology, and ontology.

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### S U R G E R Y .

BY MR. PAGET.

1. Describe the usual characters, manners of formation, and treatment of perineal and scrotal fistulæ.
2. What are the most frequent causes and consequences of menorrhagia, and how should it in each case be treated?
3. In what diseases is blood in the urine a prominent and important symptom, and what are the best signs for the diagnosis?
4. Describe the most frequent characters of scirrhus cancer of the female breast, and its diagnosis from the diseases that most resemble it?
5. Describe the processes of the separation of dead bone from—1st, the outer layer of the walls of a long bone; 2nd, from the inner layer; 3rd, from the cancellous tissue; and the processes of repair by which the separation may in each case be followed.
6. Describe the most frequent appearances of varicose veins of the leg, and the diseases of the integuments with which they are most commonly complicated. State the best palliative and curative treatment of each.
7. Describe the principal morbid conditions of stumps after amputation, and the appropriate treatment of each.

## ANATOMY.

BY MR. BUSK.

1. Describe the structure, relations, and connections of the medulla oblongata, and state what is known concerning the functions of its several parts.
2. The gastrocnemius and soleus being removed, describe the dissection of the back of the leg from the upper margin of the popliteus to the heel, describing the parts in the order in which they occur, and notice particularly the relative position of the vessels, tendons, and nerves behind the ankle joint.
3. Describe the form, situation, and relations of the thyroid gland.
4. Give an account of the cartilages of the larynx, their articulations with each other, and the ligaments connecting them, and point out the differences of structure which exist amongst the different cartilages and ligaments.
5. Describe the process of ossification in a long bone, and in the cranial bones, and describe the structure of fully-formed bone.
6. Explain the mode in which the images of external objects are formed on the retina, and how real magnitudes and distances are estimated by the sense of sight.

## MEDICINE.

BY DR. PARKER.

1. Describe the physical signs in a case of phthisis from the first deposition of tubercle to the formation of a cavity as large as the fist. What would be the hygienic and medicinal treatment during each period of the disease?
  2. Describe the anatomical characters of phthisical ulceration of the larynx. How would you treat a case of presumed chronic laryngitis without ulceration?
  3. How would you diagnose a case of fatty heart without valvular disease, and what is the treatment?
  4. What are the symptoms of effusion of blood, sudden in occurrence and considerable in amount, in the following situations:—In the right corpus striatum and optic thalamus, in the left lateral ventricle, and in both ventricles?
  5. What diseases are usually attended with enlargement of the spleen? How would you recognize such enlargement?
  6. Under what circumstances would copper and lead occasionally find their way into the body? What are the symptoms produced in each case, and what should be the treatment?
- N. B.—At this competition the Examiners adopted the plan of dictating the questions to the candidates, instead of distributing printed questions amongst them, as on former occasions.

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**MIXTURE FOR DISPELLING INEBRIETY.**—Several periodicals having referred to a mineral paste invented by Dr. Beck, of Dantzic, and praised as the true antidote of alcoholic inebriety, Dr. Chevallier remarks that the real specific for intoxication is acetate of ammonia, exhibited in the form recommended by Mazuyer, two, or two and a half grains dissolved in five ounces of sugared water, to be taken in one dose.—*Savannah Journ. of Med., from Journ. de Chimie Med.*



From the London Lancet.

## On the Condition of the Blood in Mania.

BY W. CHARLES HOOD, M.D., L.R.C.P.,

Physician to Bethlehem Hospital.

DURING the last few years, the attention of many scientific investigators has been directed to the condition of the blood in disease, and the discovery of some valuable facts has been the result. These have accumulated, and amongst them are instances which furnish support to the belief that there is some equivalent change in the blood in all diseases; and that the blood in *acute mania* forms no exception to the general rule may be gathered from the writings of Drs. Hittorf and Erlenmeyer. Much remains to be done before we can have any exact knowledge of the state of the blood in insanity, and the author, with the able assistance of his friend Dr. Marcet, has been induced to make careful analyses of the blood of six maniacal patients, during the paroxysm and in a state of convalescence, which induce him to think that the facts arrived at (not before indicated) show, that *there is a marked deficiency of fibrine during the period of maniacal excitement, and a correction of this deficiency during convalescence.* The blood was drawn by cupping at the nape of the neck to the same amount in each case, and immediately collected in earthenware pots containing about two ounces each; and it was in every instance within a few hours of extraction subjected to the same method of analysis. The six cases selected were three of "acute" and three of "recurrent mania."

CASE 1.—*Acute Mania.*—W. G—, aged twenty-one, admitted into Bethlehem Hospital in December, 1856, became maniacal one month before admission. Hereditary tendency traceable in both his father and paternal grandfather. There was no apparent bodily disease. The patient was of spare habit and an excitable temperament, and had not been subject to any medical treatment previous to his admission. Nourishing diet was prescribed, and the following sedative mixture: acetate of morphia, half a grain; tincture of hyoscyamus, one drachm; camphor mixture, eleven drachms—three times a day. At the end of a fortnight, the morphia was increased to one grain, three times a day. In September, 1857, he was discharged cured.

### Analysis of the Blood.

During maniacal excitement.				When discharged cured.			
Water,	.	.	777.39	Water,	.	.	784.93
Red particles,	.	.	149.74	Red particles,	.	.	110.07
Fibrine,	.	.	1.74	Fibrine,	.	.	2.20
Albumen, &c.,	.	.	63.28	Albumen, &c.,	.	.	90.63
Inorganic salts,	.	.	7.85	Inorganic salts,	.	.	8.00
Fatty matter,	.	.	0.00	Fatty matter,	.	.	4.17
1000.00				1000.00			

CASE 2.—*Acute Mania.*—W. T—, a drum major in the Guards, admitted into Bethlehem Hospital in March, 1857; was married, and had lived a temperate life. He was very excited, noisy, mischievous, and incessantly talking. Morphia and sedatives, with full diet, were prescribed. In March, 1858, he was discharged cured.

*Analysis of the Blood.*

During maniacal excitement.		When discharged cured.	
Water, . . . .	791.64	Water, . . . .	758.56
Red particles, . . . .	125.48	Red particles, . . . .	140.61
Fibrine, . . . .	1.55	Fibrine, . . . .	2.75
Albumen, &c., . . . .	69.84	Albumen, &c., . . . .	87.28
Inorganic salts, . . . .	8.98	Inorganic salts, . . . .	8.82
Fatty matter, . . . .	2.51	Fatty matter, . . . .	1.78
	<hr/> 1000.00		<hr/> 1000.00

CASE 3.—*Acute Mania*.—E. R—, married, and the mother of four children, was admitted into Bethlehem Hospital in June, 1857, and discharged cured in May, 1858.

*Analysis of the Blood.*

During maniacal excitement.		When discharged cured.	
Water, . . . .	806.71	Water, . . . .	800.90
Red particles, . . . .	104.68	Red particles, . . . .	109.32
Fibrine, . . . .	1.67	Fibrine, . . . .	1.75
Albumen, &c., . . . .	76.53	Albumen, &c., . . . .	74.99
Inorganic salts, . . . .	7.41	Inorganic salts, . . . .	8.89
Fatty matter, . . . .	3.00	Fatty matter, . . . .	4.15
	<hr/> 1000.00		<hr/> 1000.00

CASE 1.—*Recurrent Mania*.—E. J. G—, a single woman, was received into Bethlehem Hospital in 1837; since which time she has been subject to repeated attacks of recurrent mania, the paroxysms lasting five weeks, and being followed by two weeks' tranquility and apparent mental restoration.

*Analysis of the Blood.*

During maniacal excitement.		During the convalescent stage.	
Water, . . . .	769.66	Water, . . . .	811.68
Red particles, . . . .	121.77	Red particles, . . . .	126.01
Fibrine, . . . .	1.58	Fibrine, . . . .	2.88
Albumen, &c., . . . .	98.44	Albumen, &c., . . . .	47.54
Inorganic salts, . . . .	8.55	Inorganic salts, . . . .	9.31
Fatty matter, . . . .	0 00	Fatty matter, . . . .	2.58
	<hr/> 1000.00		<hr/> 1000.00

CASE 2.—*Recurrent Mania*.—F. B— was admitted into Bethlehem Hospital in the year 1838. The mental disease was clearly traceable to hereditary tendency. She suffers from alternations of mental excitement and tranquility. The blood was taken in each of these states:—

*Analysis of the Blood.*

During the maniacal paroxysm.		During the convalescent period.	
Water, . . . .	784.07	Water, . . . .	765.73
Red particles, . . . .	123.81	Red particles, . . . .	139.05
Fibrine, . . . .	0.06	Fibrine, . . . .	2.46
Albumen, &c., . . . .	81.69	Albumen, &c., . . . .	81.75
Inorganic salts, . . . .	8.62	Inorganic salts, . . . .	8.09
Fatty matter, . . . .	1.75	Fatty matter, . . . .	2.92
	<hr/> 1000.00		<hr/> 1000.00

**CASE 3.—Recurrent Mania.**—W. D.— was admitted into Bethlehem Hospital in June, 1841, at the age of twenty-nine, since which time he has been subject to continued attacks of recurrent mania: for a month or six weeks he will be found rational and conversable; but during the succeeding five weeks or more his entire mental condition appears to have undergone a revolution; irritability succeeds the natural amiability of his conduct, and he assumes the habits and bearing of a congenital idiot. The analysis of the blood was made at such periods as would best represent a fair specimen of each particular state:—

*Analysis of the Blood.*

During the maniacal paroxysm.		During the convalescent period.	
Water,	773.86	Water,	779.93
Red particles, . . . .	135.56	Red particles, . . . .	121.65
Fibrine, . . . . .	1.96	Fibrine, . . . . .	2.97
Albumen, &c., . . . .	79.22	Albumen, &c., . . . .	87.16
Inorganic salts, . . . .	7.99	Inorganic salts, . . . .	8.29
Fatty matter, . . . . .	1.41	Fatty matter, . . . . .	0.00
1000.00		1000.00	

On comparing these cases with those of an analogous character which have been put on record by Drs. Hittorf and Erlenmeyer, the lesson taught by them becomes more pointed and cogent.

M. Hittorf has recorded several cases of acute mania in which he analyzed the blood during the stage of maniacal excitement, and he concludes from them that there is in such cases a *diminution* in the amount of the globules, and an *increase* in the amount of water; the cases, however, show more than this, for they prove a *distinct diminution of the amount of fibrine of the blood*.

M. Erlenmeyer states that he has made 304 analyses of the blood, principally in cases associated with other internal diseases. He only details three cases; in two of them mania was accompanied by epilepsy. The conclusion drawn by Dr. Erlenmeyer from these cases, and from others not quoted, is, that augmentation in the number of red particles or in the amount of fibrine is a very unusual occurrence in insanity, and that the opposite state is the most frequent condition.

In all these cases, therefore, that have been instanced, there is a material deficiency in the amount of fibrine in the blood. Of Dr. Hittorf's seven cases, in six the amount of fibrine stands 1.3, 1.4, 1.8, 1.9, 1.9, 2.3. In Dr. Erlenmeyer's three cases the amount of fibrine stands 1.7, 1.8, 2.3. While of our own six cases, the fibrine in *all* falls considerably below the normal standard, as follows: 1.9, 1.7, 1.6, 1.5, 0.06. Surely these results express something more than an accidental coincidence.

**EFFECTUAL USE OF THE SPONGE TENT IN STERILITY.**—M. Pfeiffer mentions in *L'Union Médicale* of the 28th ultimo, that Prof. Stolz of Strasbourg succeeded in removing sterility in the case of a healthy childless couple, who had been married four years. On examination, the cervix was found extremely narrow and very rigid. The use of tents of prepared sponge for a month or six weeks, with an occasional warm bath of an hour's duration, were advised: and the lady became pregnant two months after beginning the treatment. She was eventually delivered of a healthy boy. This procedure seems to M. Pfeiffer preferable to the division of the cervix, as advised by Dr. Simpson, especially where the patients object to the use of the knife.—*ib.*

**CATHETERISM OF THE LARYNX IN DIPHTHERIA.**—A very careful investigation of this method of treatment has just been concluded. It had been carried on by a committee appointed by the Medical Society of the Hospitals of Paris, in order to answer the following question put by the Director-General of Hospitals:—Has catheterism of the larynx in diphtheria, as recommended by M. Loiseau, been successfully employed in the hospitals of Paris? The committee was composed of Messrs. Behier, Monneret, Roger, See, and Barthez, the latter of whom drew up a very careful report filled with interesting facts, and very legitimate deductions.

The committee think that M. Loiseau's treatment is not so successful as might, from his assertions, have been expected. The local manifestations have sometimes been favorably modified by it; but it does not check the disease—does not prevent its transformation into croup, and is not more efficacious than the remedies usually employed. The catheterism of the larynx, as practiced by M. Loiseau, is not a difficult operation, and has afforded temporary relief to some patients. It has cured four out of twenty-six cases; whilst tracheotomy and the internal treatment were successful in nine cases of these same twenty-six, after M. Loiseau's treatment had failed. The operation is not free from danger, as it caused the instantaneous death of a child upon whom it was performed. This catheterism, in several cases, did harm, and had to be followed by tracheotomy. The committee are, therefore, of opinion that this mode of treatment cannot as yet be substituted for the means hitherto employed, and should not, as M. Loiseau wishes, make us give up the administration of internal medicines; nor should tracheotomy be replaced by this method, as the operation is pre-eminently useful in surgically removing the obstacle which prevents the air from reaching the lungs. —*Lancet*.

**MR. JOHN CRICHTON.**—The *Edinburgh Medical Journal* announces the decease, on the 4th of July, of Mr. John Crichton, the eminent patriarch surgeon of Dundee, Scotland, and the pre-eminent lithotomist, at the age of 88. Born in 1772, he received the diploma of the Royal College of Surgeons in 1730, married at 18, and established himself almost at once in Dundee, where he soon obtained a very large medical and surgical practice. He was for a long time the head of the Dundee Infirmary, and he performed the operation of lithotomy oftener than any British surgeon, and with almost constant success. He was a powerfully made man, extremely handsome, both in youth and age, and during his laborious life scarcely suffered a day from illness. We cannot refrain from telling an anecdote of the old man, told us by Mr. Thow, one of his hospital assistants. Going round his wards one day, he came to a case of chlorosis in the person of a young and fair damsel. After feeling her pulse, patting her on the face with a "puir bonnie lassie," and asking her a few questions, he turned to his clerk:—"Maister Thoo, Maister Thoo, ma man, bring here yer buik; wricht doon, Maggie —, ætawtis 17. Recipe,—na, naething; hawbeat hominem;—that's best for her;" then turning to the patient, "Ha'e ye got a sweetheart? Tak' him."

**DIED**, at Ruatan, Bay Islands, Honduras, on the 27th June, Dr. David Philip McLagan, Assistant-surgeon H. M. S. Icarus, eldest son of Dr. Douglas McLagan, President of the Royal College of Physicians of Edinburgh.

**DR. ADOLPHE LENOIR**, surgeon of the Neckar Hospital, died lately in Paris, aged 58.

**DISEASE OF THE HEART IN TYPHUS FEVER**—The following observations have been laid down by Dr. Jos. Bell, (*Glasgow Medical Journal* :) In numerous cases of typhus, about the fifth, sixth or seventh day of the attack, the impulse and systolic sound of the heart become feeble and ultimately imperceptible, indicating a morbid alteration in the muscular tissue of the heart, especially in the walls of the left ventricle. This alteration resembles the usual changes which result from congestion and inflammation of the muscular structure; its nature, however, requires further examination, because the evidences on which the doctrine of its non-inflammatory origin rests are not conclusive, the circumstances on which Louis and Stokes have placed reliance not being uniformly present. The beneficial influence of stimulants does not prove the non-inflammatory nature of the morbid change, because in asthenic inflammation a stimulating treatment is always necessary. Whether the alteration be owing to inflammation or not, the softening must be regarded as one of the secondary effects of typhus, and the proper treatment is to maintain the action of the heart by stimulants. The same treatment is indicated in cases of cerebral and pulmonary disturbance arising in connection with the symptoms of cardiac softening. The presence or absence of the physical symptoms diagnostic of softened heart may be relied on as affording trustworthy evidence by which the sthenic or asthenic nature of these cerebral and pulmonary affections can be determined.

From these propositions the duty of the physician is evident,—to devote the strictest attention to the action of the heart, especially in regard to its impulse and sounds, throughout the course of every case of typhus.—*Am. Journ. Med. Sciences*.

**ARCHIVES FOR CLINICAL SURGERY**—By Dr. B. Langenbeck.—Among the latest news from Germany, is that of the establishment by the illustrious Langenbeck, of Berlin, of the first journal devoted exclusively to surgery in Germany, a translation of the name of which heads this notice. It is edited, under Langenbeck, by Prof. Billroth, of Zurich, and Dr. Gurlt, of Berlin, and issued from the well-known press of August Hirschwald. The announcement of these four names is a sufficient guarantee of its worth. Its contents embrace—1, Monographs and essays on surgical subjects, based on clinical observation; 2, Delineation of new or improved methods of operating, carefully illustrated; 3, Description of new or improved surgical instruments, with the requisite illustrations; 4, Statistics of surgical diseases and operations; 5, Examinations in the department of History of Surgery; 6, Topographico-anatomical, pathologico-anatomical, and pathologico-chemical examinations, with direct reference to surgical subjects; 7, Operative surgical experiments on animals; 8, Experiments with external remedial agents; 9, Miscellaneous surgical information. It is also announced in the prospectus, that a yearly report on the "progress of surgical science and art" will be introduced in the *Archives*. Wishing in conclusion, on our part, the most ample success to this new periodical, and the circulation throughout the world to which its merits entitle it, we soon hope to be able to give our readers a taste of the cream of its well-supplied stores.—*American Medical Monthly*.

**QUANTUM MERUIT**.—The Trustees of Western Reserve College, at Hudson, O., have conferred the honorary title of LL.D. upon Prof. John Delamater. To a worthier man such honor could not have been bestowed.

## Resection of Joints.

E. KRACKOWIZER, M.D., read a paper on Excision of Knee-joint.

He first considered the indications of this operation in anthracæ, drawing a distinction between the cases in which excision might be practiced and those in which amputation ought to be performed. Too little is yet known of this operation in *recent injuries* of the joint to pass a final opinion. But when we consider that Strohmeier in the war between Denmark and Sleswig-Holstein, in gunshot wounds of the knee, found the mortality without operation seventy-nine per cent., and with amputation sixty per cent., we should seem justified in giving a systematic trial to an operation, which if it succeeds not only saves a life but also a limb, whereas amputation, which to save a life sacrifices a limb, shows a mortality of sixteen per cent. In Paris, at the time of the street fights in 1848, the mortality was seventy-three per cent.

Excision of the knee-joint has been made in four cases of secondary luxation of the tibia, after every trace of inflammation had passed away for a long time—Ried in Germany, Thomson and Pemberton in England, and Gurdon Buck in America. In these three cases it was perfectly successful. For *badly united fracture of the patella*, and consequent uselessness of limb, it was performed once by Dr. Humphrey with good result.

As the operation originated in England, so its revival in that country by Fergusson has induced many to give it a trial, and all the leading surgeons are in its favor, if we except Syme, whose opposition to it has the character nearly of idiosyncrasy. Bryant gives it a very qualified approval, and the discussion in the *Medico-Chirurgical Society* of London, on P. M. Humphrey's paper, showed Holmes, Coote, Skey, and Tamplin, as rather decided opponents.

In France the operation has never attracted much attention, if we except Moreau sen. and jun.; and since Roux's case terminated fatally in 1816, it has been forgotten. A discussion in the *société de chirurgie*, November 3 and 10, 1857, revealed an entire ignorance of its merits on the part of such men as Robert, Larrey, Broca, Marjohn, and Maisonneuve. Follin and Giraldès vindicated the operation on the strength of statistics of English authors.

In Germany the operation has been ignored by the majority of surgeons. Still it was the only country in which, after the great authority of Syme had stricken it from the list of operative proceedings in England, it was practiced; the operators were Ried, Fricke, Textor, sen. and jun., Gunther, Heyfelder, Roser, Knorre, Bruns, Heuffer, Demme, and Adelmann. But it was the impulse given by the English surgeons, from the time Fergusson took it up again in 1850, that led the present generation of German surgeons to give it a fair trial, and B. Langenbeck, Ried, Esmarch, Billroth, Streubel, and Schillbach, are its able advocates, while Gunther, Roser, and Pauli, have not yet retracted the sentence of condemnation which they pronounced a few years ago against this surgical heresy.

The *objections* which are urged by the adversaries of the operation are:

1st. That it makes a very large wound. It has been proved by Fergusson against Syme, that the wound after the excision of the knee-joint, is actually smaller than after amputation of the thigh. Besides, no main arteries or nerves are wounded.

2d. That the duration of the healing process is tedious. In very many cases, the greater majority in fact, consolidation takes place after two months, and after all it is not so very rare that partial necrosis of the amputated

femur, and long suppuration from burrowing of matter, take place, after amputation.

3d. *Uselessness of the Limb.*—There are indeed cases known, where only ligamentous union has taken place, or where the carious process in the resected bones continued, so as to oblige amputation. Amputation has been resorted to twenty-one times, but the ratio of mortality is not higher than if excision had previously never been made. As for ligamentous union only, a very short one does not impair the usefulness of the limb, and the unsteadiness from ligamentous union can be remedied by strong kneecaps (Pemberton.) But putting aside this palliative, a radical cure may reasonably be expected by a repeated resection, in which case the danger from the second operation could not be greater than if we operate for imperfect union after a fracture.

4th. *Disparity of Growth in Young Subjects.*—This is a very weighty objection, and cases enough are known (Syme, Pemberton, Keith) to prove, what from anatomical and physiological theories might be expected, a very serious arrest of growth, if the operation had been performed in children. More observations, and more experiments on animals (such as were instituted by A. White, Vermandois, Wachter, Heine, and Wagner) are required to settle this point.

5th. *The Great Mortality.*—The greatest number of operations having been performed in England, we can compare the mortality in amputations of the thigh in England with the mortality of all (to me) known cases of excision of the knee-joint.

Of patients suffering amputation through the thigh for gonarthrocace, 18.2 per cent. in Guy's Hospital; in University College Hospital, 20.5 per cent. In the London hospitals during 1855, 1856, and 1857, 169 amputations were performed, with 38 deaths, or 22.5 per cent. (*Teale*.) During the same time, in the British provincial hospitals 134 amputations gave 33 deaths, or 24.7 per cent. (*Teale*.)

The number of cases of excision of knee-joint which I have collected give the following result. The table closes with 1858 for England, 1859 for Germany, and April, 1860, for America:—

England, 166 cases, 34 deaths, 19 subsequent amputations.

France, 4 cases, 3 deaths.

Holland, 1 case, 1 death.

Germany, 49 cases, 21 deaths, 2 subsequent amputations.

United States of America, 13 cases, 4 deaths, 2 under treatment, with prospect of recovering a good limb.

*Total*—233 cases, 63 deaths, 21 subsequent amputations.

#### AMERICAN SURGEONS.

#### RESULT.

R. A. Kinloch, Charleston, S. C., good limb.

Gurdon Buck, New York, “

Joseph Pancoast, Philadelphia, “

Brainard, Chicago, “

J. M. Minor, Brooklyn, N. Y., “

Wm. H. Van Buren, New York, “

Willard Parker, “ “

James R. Wood, “ good limb.

L. A. Voss, New York, under treatment, firm bony union, patient walks, necrotic bone to be touched through several sinuses.

E. Krackowizer, New York, died. Child two years of age.

D. Krackowixer, “ pretty firm union after eight weeks, carious bone in the middle.

A. B. Mott, New York, died of pyæmia. Amputation.

L. A. Sayre, New York, died after two weeks of tubercular meningitis, local reparative process excellent.

Dr. Willard has since had a successful case.

The ratio of mortality in excision of knee-joint is therefore 27 in 100. If the subsequent amputations should be counted, the ratio of failures would be 36 in 100. But it is hardly fair to count those, because, as before mentioned, the mortality after amputation, where previous excision of knee-joint had been made, is not greater than where amputation for disease of the knee-joint is performed without any previous attempt to save the limb. There are six cases known where from ligamentous union the limb was greatly impaired, or next to nothing. As an offset for this imperfect result, we may count those cases on the side of amputation, where a badly formed stump, frequent ulceration of the cicatrix, and neuralgia, cause serious inconvenience, and even danger to life and health. It must also be noticed, that the foregoing table includes all known cases, from the infancy of the operation to its present high degree of perfection. It will be readily conceded, that in this respect it is now put on equal terms with amputation, whose technicism and after treatment has, it may be said, almost reached the top of perfection. But, granted that statistics of mortality should always pronounce to a limited degree in favor of amputation, it must be maintained, that for the possibility to secure a natural limb, although stiff from the hip to the ankle-joint, the surgeon may subject his patient to a little greater risk than he runs when the limb is sacrificed.

The operation is generally not a difficult one, but it may become so, when the leg is flexed in a very acute angle on the thigh, and at the same time rotated outward. There is no necessity of a particular saw, as recommended by Butcher. One of the greatest improvements in the operation he considered the *wiring* together of the femur and the tibia, as it facilitates immensely the after treatment, and prevents some of the unpleasant accidents after the operation, for example, the tendency of the lower end of the femur to project forward and outward.

As one of the great troubles in after treatment originates from the burrowing of matter, it would be worth while to consider the propriety of making, at the time of the operation, a counter-opening in the popliteal space, to lead the matter off the most direct way, and prevent its stagnation.

The after treatment is of more importance than in the resection of any other joints. The limb ought to be well secured in an apparatus which will allow as much as possible the dressing of the wound without disturbing the position of the limb. If one of the two great points in the treatment of complicated fractures (and in this category an extremity with a resected joint must be put) — rest and cleanliness — after excision of knee-joints, has the precedence before the other, it is rest. Better to have the dressing inundated with matter, and merely wipe it off, as far as access is permitted, than be over nice, and take up the limb every time the dressing is soiled. The apparatus in which the dressing is placed should therefore be so constructed, that the region of the resected joint should be accessible to inspection and manipulation. He had constructed his apparatus after the one which he had seen used by Dr. J. M. Minor, of the Brooklyn City Hospital. On an iron frame, with a movable foot-board, was attached one metallic band for the support of the thigh, and another for the leg, leaving an interstice for the region of the knee, thus giving excellent access to the operated parts. The only objection was, that it left the resected parts without sufficient support. He had therefore added a middle-piece, which, when dressing was required, would be removed, without disturbing the rest of the apparatus. The apparatus ought to be very wide and deep, so as to allow of liberal supply of soft lining, as the intention is to disturb the rest of the limb as little as possible. Nothing answers better to keep the limb in absolute rest than filling the in-



tervals between the apparatus and the limb, and covering the last with small sand-bags, as advised by Mackenzie. If the apparatus swings from a fixed point above the bed, it not only adds to the comfort of the patient, but facilitates the labor of the surgeon in dressing.

All the accidents which may spring up in the course of the treatment, are those common to resections and amputations, and must be met according to the general rules of surgery, modified by the exigencies of the locality of the operated parts.—*American Medical Times*.

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CAUSE OF STERILITY.—Dr. Chaille, who lately visited New York, writes to the *N. O. Med. and Surg. Journ.*, as follows: "Dr. Emmet, Assistant Physician to the Woman's Hospital, supposes, and I presume his opinion reflects that of Dr. Sims, that copulation seldom results in conception, unless the os uteri be in such a position as to fairly receive the discharge of semen from the meatus urethrae of the penis. If the impulse of the semen in the act of coition be not directed fairly into the womb's mouth (in consequence of its faulty position,) then sterility may result. Dr. E. asserts that, notwithstanding those exceptional cases where pregnancy has occurred without even penetration of the virile member, it is none the less true that the wives of those men who have had an abnormal termination of the urethra (the meatus being situated, not on the glans penis, but somewhere in the course of the urethra,) have been sterile, which would tend to establish the assertion that impregnation usually requires something more than the simple introduction of semen into the vagina."—*Id.*

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ON THE INFLUENCE OF BELLADONNA ON THE PNEUMOGASTRIC NERVE.—By Richard Hughes.—That belladonna has such an influence will farther appear from a consideration of its effects on disease. Hooping-cough and asthma are admittedly spasmodic affections, in which irritation of the pneumogastric nerve is at the bottom of the phenomena: and both of these affections are singularly under the control of belladonna and its congeners. Stramonium is the favorite remedy in asthma; and the use of belladonna in hooping-cough is becoming more and more general. In the former case, we have the evidence of direct experiment for our theory. Galvanisation of the pneumogastric has been found by Valentin to produce constriction of the trachea and bronchial tubes; while on the other hand, in animals poisoned by belladonna and stramonium, these tubes have been found lax, and have refused to contract under the strongest stimuli (Watson's *Lectures on Physic*, 4th ed., vol. ii., p. 358, 363.) Lately, moreover, an enterprising French surgeon has attempted and (apparently) achieved the cure of asthma by injecting a solution of atropine upon the pneumogastric nerve in the neck (*Medical Times and Gazette*, Nov. 26, 1859.) Another affection in which belladonna has been found very beneficial, and in which the pneumogastric is the seat of irritation, is obstinate spasmodic vomiting. A patient was suffering from cancer of the pylorus; the usual incessant vomiting took place. Belladonna was given, and it ceased. After death the stomach was found lax and enormously distended. Mr. Amesbury tells me he once had a case of obstinate vomiting in pregnancy. All the usual remedies failed; at length he tried belladonna, with complete success. Here again, as the pneumogastric is the motor nerve of the muscular coat of the stomach, a sedative influence exercised by the belladonna upon this nerve will explain the phenomena.—*British Journal*.

## Communications.

### Cauterization of the Lobe of the Ear, a Cure for Chronic Rheumatism.

BY N. R. DAVIS, M. D.

[We here leave out six lines of our correspondent's communication, because we have determined never to allude to the *thing* there mentioned. All well posted physicians know this is no new suggestion. We are obliged to Dr. Davis for ventilating this little fact.—ED.]

I copy from the *New Orleans Medical and Surgical Journal* of November, 1852, the following, entitled "Cauterization of the Lobe of the Ear, a Cure for Chronic Rheumatism :"

"It has already been reported through the medical press of this country that cauterization of the lobe of the ear is an instantaneous cure for 'Sciatica'; but we now can go one step farther, for it appears from the following facts reported by a French physician (M. Henry), that he was induced to try the same means, and, to his astonishment, with success, for the relief of chronic rheumatism. A man, whose age is not given, had suffered for five years with this disease in his right arm; the pains were deep-seated, and almost insupportable. M. Henry had resorted to all the remedies recommended in such cases, but without success. Says M. Henry, when I proposed to burn or cauterize a certain spot in his ear, he laughed at me. He, however, consented, and great was his astonishment when, at the end of a few days, the pains in the arm entirely cured! This cure, he proceeds to observe, was reported over the country, and in a few days afterwards Michel Boda, of M\*\*\*, applied to me, and requested to be treated in the same manner for rheumatism in the left arm. He was subjected to a similar treatment, and with a success equally prompt and decisive. With these facts before us, continues M. H., I ask how these cures are effected? Here he proceeds to trace the course of the great sympathetic nerve, which arises from the superior cervical ganglion, he remarks, behind the ear, and after having traversed the thoracic and abdominal cavities, then becomes confounded with the sacral pairs, whence proceed the nerves of the inferior extremities."

It will, therefore be seen that this treatment is not of such recent date and discovery, and whether the success attendant upon the cases mentioned in the above article will be sustained in future operations, remains to be proved. Certainly, patients laboring under this painful disease are not unfrequent, and should be willing to give it a trial.

WEAVERVILLE, Trinity county.

[This communication was omitted by mistake last month.]

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Diseases of Children.

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BY A STUDENT.

Continued from page 184, Vol. II, of the P. M. and S. Journal.

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WHAT I say in this and the following papers will derive its interest, if it have any, not from the newness of the facts, but from the novelty of the style in which they are conveyed. My design is to be as laconic as truth, and as positive as science permits. Still I may be prolix, and my propositions may appear uncertain. I cannot see myself as others will see me.

1. *Cutting the Cord and Washing the Child.*—As soon as the child breathes freely, a strong thread or twine should be tied about the cord, not nearer than half an inch to the navel of the infant, and another an inch or more nearer the placenta, and the cord cut between the ligatures. This little precaution of applying the second ligature is merely for the sake of decent cleanliness, to prevent the placental blood from pouring into the bed, where there is by this time quite enough liquid of every description. The washing and dressing of the child are of considerable importance as to its subsequent health and comfort; but, inasmuch as my object is to write the simple facts, and not words unnecessarily, I will merely say, the child should be washed in water nearly at blood heat, made a little slippery with soap, a fine, small sponge being used for the operation. The eyelids should be washed in water without soap, and pains be taken not to get any soapy water into the eyes. The child should be wiped—not rubbed—dry with old soft linen cloths. As soon as the child is dry, it should be again moistened all over (the eyes excepted) in diluted alcohol, one part of the latter to six parts of water, to hasten the cure of any invisible abrasions of the cuticle that may have occurred during parturition and subsequent manipulations, indeed that almost always do so occur, howsoever careful the accoucheur and nurses may be. The physician would do a sensible thing and save himself from the risk of considerable annoyance for the first few days thereafter, if he would stand over the nurse during these simple maneuvers, and see that she performs them to his satisfaction. The temperature of the apartment in which the dressing is performed should not be less than 70 degrees Fah. It is unnecessary to say that the end of the cord must be confined above, not below, the navel of the child. If the reason is not intuitively apparent, explanations will not make it plainer. If the child's hands and feet and ears, etc., are purplish after it is warm and dressed, and has cried freely, I do not think we can help it by meddling; better trust to nature and good nourishment. This cyanosis may go off by degrees, and be replaced by the more desirable pinky coloration resulting from a freer aeration and circulation of the blood. It will not be removed by slapping the child's chest, by frictions, stimulants, nor hot baths. Medicine will not reach it.

Almost the first affliction of the child is what the nurse calls "snuffles," a slight catarrh, attended with some sneezing. Do not be troubled about it, but let the child have a little more air. Do not cover up its face with the bed-clothes, nor let it lie with its face flattened against the mamma of the mother, or, what is worse, with its nose in her arm-pit. If you do, its cold will get worse, its lungs will become congested, its nerves excited, its brain or medulla spinalis irritated, and it will have trismus, and may be, nay, quite

likely, die. If not so bad as that, it will have coryza and sore eyes, and diarrhoea, or something that will annoy and take time and patience and science to remedy. It is easy to prevent, hard to cure.

2. See that the child urinates early and often, at least twice in twenty-four hours. I neglected to look to the bladder in an infant a day old. At my visit the second morning, the nurse said the child cried a great deal, and rolled its eyes and jerked its arms. I looked at its diaper; it was free from urine. I inquired for the wet ones; there had been none. The infant had not yet voided its urine. Here I came near losing a child with clonic convulsions, resulting from uræmic poisoning, from not asking, instead of waiting to be asked, about the urine. Cloths rung out of hot water, (blood-heat,) placed over the genital organs, soon produced a copious excretion of water, and the child slept and was happy. If the hot cloths fail, do not try diuretics, but immediately pass a No. 1 gum catheter, oiled and warm; delay a little too long, and the babe is lost, and the poor mother's heart rent with anguish.

3. *Injuries of the Covering of the Head.*—During the labors of birth, the head of the child is liable to contusions, either by pressure against the bones of the pelvis of the mother, or, in case of delivery by forceps, by the pressure and slipping of this instrument, sometimes one ear will be crushed by the forceps, occasionally a livid streak will be produced across the posterior portion of the face on one side.

These bruises require no treatment except, first, the alcoholic lotion above mentioned, and afterwards toilette cream or glycerine, and to be covered with a single thickness of soft old linen; not to keep the air away from it, for the air is curative, properly employed, but to keep it from moving or blowing over the raw surface. *It is the motion of air over a wound or solution of continuity that does injury, and not the air itself.* That is, the protoxide of nitrogen is not a deleterious application to a wound. It is the rapid evaporation that does injury, and causes pain in exposed raw surfaces. The moisture upon the surface tends to disappear, but exomosis from the minute vessels furnishes more fluid under the stimulus of the tendency to a vacuum, which nature abhors, and thus the air acts like the end of a towel in a glass of water, drawing the liquid even over the sides of the glass against gravity by capillary attraction, combined with the tendency to the production of a vacuum at the point where the towel is in contact with the water. Keep the air from moving over the abrasion, but do not keep it away from it by something which air cannot pass through, as plaster, oiled silk or the like; these are all hurtful, and retard the cure of the bruise or injury.

4. There is an affection of the scalp seen after birth produced by some process which may be rationally surmised, but is not easy of demonstration. I allude to that rare affection known as *cephalæmatoma*, or sub-pericranial effusion of blood.

Says Mr. West:

"Although once the subject of much difference of opinion, the mode of formation of these tumors, and the nature of the changes they undergo, are now tolerably well understood. The edges of the os uteri, compressing the fetal skull during labor, just as, in this engraving, the hands are represented compressing it, often produce an effect similar to that which you see depicted here, and occasion an oozing of blood from its surface; or the same result may follow from undue pressure of the fetal head against the pelvic walls. The quantity of blood thus poured out is usually small, and is then speedily absorbed, without having at any time produced a perceptible swelling. If, however, it be more considerable, a tumor is formed on the exterior of the

skull, and this tumor may continue to enlarge for some time after birth, owing, possibly, to the influence of causes calculated to keep up a congested state of the brain, and to favor the effusion of blood.

"The blood thus effused speedily coagulates, and the edge of the coagulum sometimes conveys to the finger an indistinct sensation of a raised border surrounding the tumor. The elevated ring that is afterwards plainly felt circumscribing it, is, however, mainly the result of a reparative process, in the course of which a fibrinous exudation is poured out over that part of the skull whence the pericranium has been detached, and is heaped up in great abundance just where the bone and its investing membrane come into apposition. This is proved to be its real source, by the circumstance that the ring becomes much more evident after the absorption of the blood has commenced than it is at first; while in those cases where the effusion of blood has been very considerable, no ring is perceptible during life, and it is found, after death, that scarcely an attempt at reparation has been made, and that the fibrinous exudation is very scanty, or altogether absent."

"The characteristics of these tumors are so well marked, that they are not likely to be confounded with swellings of the scalp produced by any other cause. A hernia of the brain, indeed, may present some resemblance to them, since it forms a soft, painless tumor, unattended by discoloration of the integuments, and the edges of the aperture in the bone through which the brain protrudes may easily be taken for the ring surrounding an effusion of blood beneath the pericranium. Independently, however, of the pulsating character of the swelling formed by hernia of the brain, its situation at one of the fontanelles, probably the posterior, or in the course of one of the sutures, will generally distinguish it sufficiently from these sanguineous tumors, which are almost always seated on the parietal bone, and near to its protuberance."

There was a case of this kind,\* which could hardly have resulted from pressure of the os uteri, or of the bones of pelvis *during* parturition. It doubtless resulted from pressure at some period, but it must have been intra-uterine, and anterior to labor by many days. The right parietal bone of the fetus might have rested on some osseous point of the mother's pelvis sufficiently long to have caused the effusion or this result might have occurred suddenly in consequence of some sudden motion of the mother by which the child's head was forced with some violence against the pelvic ring. A sudden, somewhat violent pressure is admitted to be adequate to the production of this tumor, and it certainly might occur long anterior to parturition. The treatment is: Draw off the contents of the tumor with a trocar, and apply compresses. [See case treated in this manner recorded page 106, volume III., No. 27, of this Journal.] Others can wait four or six months till absorption takes place, or till pyemia or adynamic fever supervenes, if they prefer; but this treatment is speedy and effectual, and I am unable to see how it is attended with any risk.

(To be continued.)

\* See page 106, vol. III., Pacific Medical and Surgical Journal.

## Abstract from Notes on the Minute Structure of the Spinal Cord.

BY DR. JOHN B. TRASK.

SINCE the days of J. M. Meckel, the substance of the brain and spinal cord, with the functions they perform in the animal economy, has engrossed the attention of the anatomist and physiologist. Until within very recent dates, but very little was known of their peculiar structures, and the functions to which they give origin. It may be said with truth, that within the last ten years more positive knowledge has been acquired on this subject, than was developed during the two centuries that preceded this decade.

In 1837, Remak, Purkinje, and Muller, discovered the multipolar cells in the Pons Varolii; ten years after this period, Wagner, in his researches on nerve structure, arrived at the conclusion that the ganglia, or nerves containing them were, afferent in function, and that this particular feature would serve to separate such nerves or centres, from those possessing motor power. This hypothesis soon fell to the ground, and under the searching scrutiny of Kolliker, the theory of those functions set forth by Wagner shown to be entirely baseless; this latter observer demonstrated that the multipolar cells of the former possessed little, if any, of the functions attributed to them.

In 1856, the work of Stilling, on the microscopic anatomy of the Pons Varolii was issued. Having never seen this work, I can judge of its demonstrations only by those who have seen it, and from the remarks of Dr. Todd concerning the powers used by Stilling, it would seem almost impossible that the elements of the nerves should have been seen by him, except the very largest. It is proper here to state that there is possibly an error in Dr. Todd's statements in this particular.

At a still later date, (1859) the thesis of M. Jacobowitsch on experimental physiology was presented to the Academy of Sciences, of Paris. In this paper, the author has entered into the analysis of the elements of nervous function in the cord, and has demonstrated three orders of cells giving origin to different functions, which are as follows: First, the round or oval cellules; Second, the stellate cells; Third, the fusiform cells. In birds he found the ganglion cells and the cellules of movement largely developed, while those of sensibility are inconsiderable, [relatively?] It was also found that the cellules of movement in these existed in the posterior cornua, and that in this case the elemental arrangement differed from that found in mamifers, for in these latter the afferent elements are largely developed, [exclusively?] in this part of the organ.

The cotemporaneous researches of Lenhossek, do not lead us farther than those of the preceding author, nor so far even, as regards the primordial elemental features of these three orders of nervous function.

This short resume of our positive knowledge on this subject I have thought not inappropriate, as it furnishes at a glance the important features to be considered in future investigation. It is from this point of view in which Jacobowitsch has left us, (as we glean from his official report) that we now take our departure, not that any new elements have been developed under our observations, but to localize those elements in such manner that they may be more readily found by those commencing these investigations, than can now be done by the publications at our command. Without further preface I will proceed to state the results of my observations in relation to these cellules, and their positional relations to one and the other.

The spinal cord of the sheep was selected for the experiments about to be detailed, for the reason that the animal holds a comparatively recent origin in the animal kingdom, and among quadrupeds possesses a marked delicacy of structure. The rapidity with which softening of its nervous tissues occur after death, being equalled only by that of man.

One of the great obstacles heretofore, has been a want of transparency in sections of nerve tissues, which as a consequence would render very much of the minutiae of detail obscure or absolutely unresolvable; those objections urged against researches of this character are now removed from the fact that our sections are rendered perfectly transparent by subsequent modifications of Stilling's process, recently introduced by J. L. Clarke, of London. Although the white substance of Schwan is rendered so perfectly transparent as to be imperceptible on the stage, still the outline of the cellules of the cord with their nuclei are so well defined that their characteristics, even to the minute structure of the cell-wall, is easily seen. The learned owe much to the researches of Mr. Clarke in thus enabling them to obtain such superior definition of these minute forms of structure. I would here state in connection with this part of the subject, that the process of Mr. Clarke is far from complete, and that he will find less color, and better definition, in using the *neutral* chromate of potassa, and subsequent to this a very dilute solution of *caustic* alkali; neutralizing the latter with *acetic* acid, and washing with water; the chemical reasons for this will become apparent to him at once on a moment's reflection. I have thus obtained sections perfectly transparent, and ready for mounting in seventeen hours.

I do not propose writing a method of preparation now, for the subject is still a matter of experiment with me as to which is the best method, and we had better wait for a final success or failure, than attempt to expound a process that is immature.

My experiments on the spinal cord of the sheep, were commenced at the first dorsal vertebra, and carried downward to the first lumbar; and then from the place of beginning they were carried upward to the first cervical vertebra. These were the preparatory steps in the experiments, and were conducted in rather a rapid manner, for the purpose of obtaining the position of certain parts which had been previously determined upon for examination, and which were found not to present an entirely uniform phase and position in all parts of the cord intermediate between the points named.

After obtaining through the above means the approximate relations of the parts, I then commenced at the second cervical vertebra, and carried the sections from this to the first dorsal. This portion then is the only part of the cord examined by me with care, and in the present paper I shall attempt to describe but a part of this space, viz. : that included between the upper surface of the second, and the lower surface of the fourth cervical.

The first series of experiments were made upon transverse sections for the purpose of obtaining the relations of position of the nerve elements (?) thus displayed, and those of the columnar and central portions of the organ.

#### THE CENTRAL CANAL OF THE CORD.

In using the term "canal," in this place, it is done for the purpose of conforming to the use of a word expressing an opening, or cavity in the central portion of the spinal cord. Strictly speaking, we are not justified in its use in this particular, for it has not as yet been shown that this opening is not a closed sac, but to avoid confusion the term is preferred here until further investigation shall develop its true character.

The fact is patent that many of the most eminent anatomists, even of the present epoch, have denied the existence of the central canal of the spinal cord, and Kolliker is among the number of living observers who have taken that position.

On page 655 of the Encyclopedia of Anatomy and Physiology, the same doubt is expressed by Mr. Todd. He says "If such a canal exist, it must be extremely difficult to demonstrate, as I have *never* after numberless examinations, been able to see it. In transverse sections of the spinal cord which have been dried upon glass, there is sometimes an appearance which may be attributed to the presence of a minute canal; but I should be more disposed to ascribe it to the patulous mouth of a blood vessel which had been divided in making the sections, for it is by no means constant even in different regions of the same spinal cord. The situation some have assigned to this supposed canal, is between the gray and white commissures; but Stilling and Wallach place it in the gray matter. It is obvious that an artificial separation of these layers, which is easily effected, and more especially while the preparation is being dried, would give rise to the appearance of a canal upon a transverse section. It may be further stated, that the deepest part of the longitudinal fissure is wider than any other portion of it, and if cut across, might appear like a canal."

Dr. Todd then quotes the observations made by Tiedemann on this subject, in which the latter uses the following language. "The spinal marrow represents a hollow cylinder, the thin walls of which are bent backwards, the posterior part representing a longitudinal opening; for it is hollowed by a groove, *termed the canal of the spinal marrow.*" \*

On page 708, Dr. Todd reiterates his remarks on the position assigned it by Stilling and Wallach, and concludes as follows. "The point is one on which I am not prepared to express a decided opinion at present, and which deserves more extended examination."

\* Leipsieg, 1842. The italics are in the original.



We have here then the latest competent authorities on both sides, on the existence of the central canal of the cord, and the closing remarks of Dr. Todd most clearly indicate that good reasons were advanced that at least dispel a portion of the doubt which hung over his mind in relation to this subject formerly.

It is clearly evident from the remarks of Dr. Todd and those of Kolliker, that this canal has not been seen by them in the higher mammalia which had arrived at adult age, or, at any rate, it has never appeared sufficiently apparent to those observers except during the periods of foetal life.

As to the remarks of Tiedemann touching this subject, he clearly regarded the posterior terminus of the anterior median fissure as the point at which the central canal had been located by observers who had preceded him.\* In this Tiedeman was undoubtedly correct, but at the same time he was equally wrong so far as regards the central canal or its true position, for this opening in the cord is at a distance posterior to Tiedemann's opening, more than equal to twice the antero-posterior diameter of the canal, and is separated from the position assigned it by those observers, by tissues materially different from the walls of the anterior fissure.

I think there cannot rationally exist a doubt as to the presence of this canal in the spinal cord of the higher vertebrata. In the sheep, such a canal is present beyond all question, and I make this statement without hesitation, for in *four hundred and thirty sections of the cord of this animal, I have never* (except in a single instance in the upper cervical region) *seen it absent*. I have always found it in any portion of the cord included between the upper cervical and first lumbar vertebra.

These experiments were conducted upon the cord removed from nine animals, and in the sections made from the different specimens, I have invariably met with the same features at identical points of the organ from each animal. I regard its demonstration as incomparably less difficult, than to bring out the large caudate corpuscles in the commissures.

Every precaution was taken in these experiments to avoid laceration of the tissue of the cord after the sections had been made; *and in no instance was any section allowed to dry on glass, but on the contrary, none of the sections were allowed to become dry on any surface whatever*; if that process had been pursued, laceration of the delicate tissue of the cord could not otherwise than have followed as a consequence of such process, where one five-hundredth was the thickest, and one eight-hundredth of an inch were the thinnest of the sections used.

I have before alluded to the want of transparency in sections of nerve tissue, and the objections urged against the existence of the central canal

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\* Recently, (1859) Professor Lenhossek has seen a case where, on opening into the cord, it was found that the pia mater where it descends between the anterior columns, (forming the membrane of the anterior fissure,) had become adherent, and thus formed a canal. Prof. Lenhossek also states that he has never seen the central canal closed [in man] as described by Virchow.

and other structural portions of the cord, based on the *presumption* that the transparency obtainable in those preparations was insufficient to develop the minute structure abounding there.

So far as regards preparations made by myself, those objections are entirely invalid, for any person with ordinary vision can read through them with ease the finest letter that can be resolved without the aid of a loupe. The letters composing the Lord's Prayer, engraved in the space of one-fourth of an inch, suffer nothing in distinctness with the interposition of these sections between the eye and engraving; I use these engravings as my test for transparency, and reject all specimens which will not transmit light sufficient to enable the eye to thus resolve the letter. This severe test I trust will be sufficient to set aside the question of transparency being unattainable to investigate these structures. In regard to the experiments of Stilling, so far as the location of the central canal is concerned, I think he has placed it in its proper position. I have invariably found it in the place assigned it by him, viz.; in the gray matter, or, more properly speaking, in the central portion of the posterior or gray commissure. While the observations and experiments on the cord by me, fully corroborate his statements in this particular, it is almost impossible to conceive how he should have located this minute opening with so much accuracy, considering the powers Stilling used (10 to 12 diameters, Dr. Todd) in his investigations.\*

The central canal of the cord does not appear to be uniform in size or shape at different parts of the organ, but at the same time it holds a great degree of uniformity in the same region of different cords, from animals of the same species; it may therefore be considered symmetrical in form. It could scarcely be expected that its opening would be *perfectly uniform* in all cases in a half inch of the same cord from any one region, for two reasons: it appears to partake of the inequalities of the cord, and would become extinct probably in the lower sacral region, while it is found to enlarge more in proportion in the dorsal swelling, than in the cervical enlargement above it. Another cause of variation in its form is, beyond question, purely mechanical, and results from our manipulations; when we consider how fragile and delicate is the organ, the extreme tenuity of the sections, and that the canal is formed of a membrane more dense than the columnar and commissural parts surrounding it, and that an almost inappreciable inequality in its sections could not do otherwise than induce a *degree* of distortion, it is not a valid objection to the existence of the canal that it does not always present a perfectly symmetrical outline.

(To be concluded in next number.)

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\* It appears to me there must be some mistake in these powers as given by Dr. Todd.

## Editor's Table.

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**UREMIA—DIFFERENTIAL DIAGNOSIS.**—This disease was formerly so called because it was supposed that the functions of the kidneys being suspended or diminished, urea and uric acid were retained in the blood, and poisoned the organism, causing the nervous phenomena by which we recognize this disease. Subsequently it was ascertained, I do not recollect by whom, that urea and uric acid existed normally in the blood; then the disease was said to result from excess of these constituents. This may still be true, but no one *knows*. A couple of Germans, Væhler and Frerichs, (see *Gaz. des Hop.*, No. 72, '60,) said it was not to urea or uric acid, or other azotized substances, that the poisoning of *uremia* was due. They said, and still say, that there is a ferment which converts urea into carbonate of ammonia, and that it is this product of metamorphosis that causes all the phenomena; that all the tissues in these cases contain ammonia. Objection, says M. Aran:

1. This ferment has never been demonstrated.
2. Carbonate of ammonia exists in the normal state of the blood.
3. Finally, Cl. Bernard injected carbonate of ammonia into the veins of dogs, which only made them howl with pain, but produced no symptoms of poisoning, like those observed in *uremia*.

Can any one, says M. Aran, say that the chemical products, urea and ammonia, are precisely the same as these substances circulating in the blood? Is the fibrin which coagulates in the vessel of blood drawn from the veins exactly the same as that which circulates in the vital current? Who can say what changes life causes in the substances at every moment? Is it not known that solely under the influence of the nervous system the chemical composition of the humors of the animal body vary every instant? Witness the effect of stimulation of the nervous filaments which go to the parotid gland upon the color of the blood in that gland, the variation of the degree of acidity of the gastric juice, or of its digestive power when in the stomach by emotions of the mind.

We do not say exclusively that it is urea or carbonate of ammonia or any other definite chemical compound that causes the phenomena apparent in uremia, when so important a function as that of the kidney is interrupted. We do not say it is not these, or one of them to which the symptoms are due, but it has not been shown that it is.

How then shall we recognize that the convulsions, coma, delirium, are due to uremic poisoning? By the particular investigation of the antecedents, not only if the urine be albuminous, but what is its specific gravity? The symptoms of uremia are not evident solely when the urine contains albumen but even when the kidney is completely destroyed, and no longer permits the albumin, or urea, or salts of the blood, to transude so as to reach the ureters, but only a liquid, almost purely water. In these cases the specific gravity of the urine is much diminished, so that this may be considered a new sign of uremia, and should not be neglected, especially if percussion reveals increased extent of dullness over the renal region.

Hysteria is distinguished from uremia by the extent and disorder of the actions of the patient, who invariably throws himself out of the bed if not restrained by force. Besides, the frightful shrieks in the case indicate the

perfect freedom of the larynx. The thumb, in place of being bent into the palm, is extended and separated from the fingers. In hysteria there is never complete abolition of consciousness; sensibility is sometimes exalted; there is never coma in hysteria.

It is easy to confound *uremia* with *epilepsia*. But the antecedents, and the examination of the urine will set us right in the diagnosis.

In uremic attacks the patient never shrieks or screams at first, as in *epilepsia*, and the coma is more prolonged in *uremia*.

*Uremia* is distinguished from *etanus* by the persistence of the convulsive rigidity of the limbs, and by *trismus*, and finally, if the patient has been wounded, or suffered any traumatic lesion several days anterior to the attack, it will much simplify the diagnosis.

It is distinguished from the coma of *apoplexia* by the latter being accompanied with *hemiplegia* by the loss of consciousness, being less complete than in *uremia*, and the *apoplexia* not being preceded by convulsions.

Finally, it is distinguished from the coma of intoxication by the absence of alcoholic odor from the exhalations, from the respiration, and from vomited matters, which are also generally mixed with wine or alcoholic liquors in visible quantities.

We distinguish poisoning by opium from *uremia* by the extreme contraction of the pupils, (in *uremia* they are dilated) by the great heat of the skin at first, and then the copious perspiration, and sometimes a peculiar miliary eruption.

Poisoning by *belladonna* is known by excessive dilatation of the pupils, coinciding with noisy delirium, and hallucinations particularly of vision.

Thus it is perceived, says M. Aran, that if it is not easy at all times to distinguish *uremia* from other affections which disturb the nervous system to a great degree, by care and close differential examination we may at least be able to rationally suspect its existence under certain circumstances already detailed with sufficient minuteness.

**LONGEVITY OF MEN OF LETTERS.**—We find in the *Gazeta Medica Lisboa*, 16th August, 1860, the following table, with an interesting note of Senor R. de Gusmao, concerning the longevity of the learned of the Portuguese peninsula. Will some one publish a similar statistical table concerning the deceased men of culture and the learned professions in the United States? We will contribute our mite as occasion occurs. But to the subject. We do not change the Portuguese orthography of the proper names. At a meeting of the English Statistical Society, Dr. Grey read an interesting memoir upon the duration of life among men devoted to the culture of the sciences and literature. The result of the investigation was, that these pursuits are not opposed to long life.

In fact, it is deduced that in the sixteenth century, the average life of writors (authors) was 84 years, in the seventeenth 63 years, and in the eighteenth 65 years.

Taking at random twenty-four names from the list of Portuguese writers of different periods, ascertaining the age of each and finding the sum, we learn that it makes 1,686 years, which divided by 24 makes 70 years. This result is more favorable to longevity than that of Dr. Grey, but less conclusive, because based on a very limited number of facts. Nevertheless, we give them in tabular form, and add a table of 24 celebrated long-lived physicians as a simple curiosity:

	AGE.
Fr. Bernardo de Brito, died at	48
P. Jao de Lucena,	50
Luiz de Camoes,	55

	AGE.
Joaõ Baptista de Almeida Garrett, . . . . .	55
D. Francisco Manuel de Mello, . . . . .	55
Jacinto Freire de Andrade . . . . .	60
Duarte Ribeiro de Macedo, . . . . .	62
Francisco de Sa de Miranda, . . . . .	63
P. Manuel Bernardes, . . . . .	66
D. fr. Fortunato de S. Boaventura, . . . . .	66
P. Jose Agostinho de Macedo, . . . . .	70
Fernao Mendes Pinto, . . . . .	71
P. Antonio Pereira de Figueiredo, . . . . .	72
Antonio Ribeiro dos Santos, . . . . .	73
Joao de Barros, . . . . .	74
Andre de Rezende, . . . . .	78
D. fr. Francisco de S. Luiz, . . . . .	79
Affonso de Albuquerque, . . . . .	80
D. Francisco Alexandre Lobo, . . . . .	81
Felix de Avellar Brotero, . . . . .	84
Francisco Manuel do Nascimento, . . . . .	85
Fr. Francisco de S. Agostinho Macedo, . . . . .	85
Jose Monteiro da Rocha, . . . . .	85
P. Antonio Vieira, . . . . .	89

## LONGEVITY OF CELEBRATED PHYSICIANS.

	AGE.		AGE.
Boerhaave, . . . . .	70	Harvee, . . . . .	81
Haller, . . . . .	70	Mead, . . . . .	81
Tissot, . . . . .	70	Duhamel, . . . . .	82
Gall, . . . . .	71	Asturc, . . . . .	83
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THE HEALTH OF THIS METROPOLIS.—During the past month there has been a marked adynamic tendency in disease. There have been many cases of typhoid fever; also, of low diarrhœa and dysentery—a few well marked cases of diphtheria of the *mild form*—none fatal. Affections of the throat, pharynx and tonsils have been more frequent than in the month of September; the usual amount of trouble in dentition, and some fatal cerebral cases consequent upon this cause and typhoid pneumonia.

The illustrious General Clark, so long an ornament to the Army of the United States, has fallen a victim to this universal adynamia. The lamented General was under the skillful and always rational treatment of our former editorial colleague, Surgeon Charles McCormick, U. S. A.; and if judicious treatment *could* have availed, he would not have died. We hear of few cases of rheumatism, but bad colds seem much in vogue. There are but very few cases of phthisis in town, or, if the contrary, they manage to keep out of sight of the medical faculty. Finally, sore eyes are diminishing in proportion as the gentle rains beat down the ever whirling mist of sand, whose invisible flints are wont in the dry season to smite without ceasing the fountain of tears, till the whole city weeps, even while firing salvos, and intoxicated with prosperous happiness.

A "CONSUMMATION DEVOUTLY TO BE WISHED."—It is proposed to add a medical department to the new University of California, with certain restrictions which have not heretofore been imposed on any medical college in the Union. Well informed persons view with alarm the increase of charlatanism in the regular profession of medicine; and California proposes to set an example in educating that class to which she commits the lives and happiness of her children.

It is proposed to have a Board of Examiners, in no way connected with the Medical College, to examine all young men who wish to become candidates for graduation, which Board shall require of such persons as indispensable pre-requisite to their admission on the list of candidates, that they have a thorough acquaintance with the Latin and Greek grammars, and be able to construe these languages; that they be able to read at least one modern language besides English; that they be familiar with the axioms and principles of mathematics; that they shall have advanced as far as quadratic equations in Algebra, and as far in Geometry as to an understanding of at least the first three books of Euclid; that they shall pass a satisfactory examination in History and Geography. This Board should consist of four members, selected one from each of the professions of Law, Divinity, Medicine and Literature.

Upon recommendation by this Board, the aspirant may become a candidate for graduation in Medicine. The Board for this examination should also be composed of gentlemen in no wise connected with the College, at least one of which Board should be a surgeon in the Army or Navy of the United States, with the rank of Surgeon.

A Medical College founded upon such a basis would be an honor to the Union, and would attract students from other States. To graduate at such a College would be an assurance to the people that the graduate was, by culture at least, worthy of their confidence.

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PERCHLORIDE OF IRON was considered, at Milan, says Baron Larrey, by Cambay and Salleron, a specific in hospital purulent infection. Velpeau says it acts as a disinfectant in varicose and scrofulous ulcers, in chronic sores in the aged, and in parasitic disease of the skin. Delau, who has studied this remedy more than any other man, says it is of immense utility, not only in diseases of the skin, but in specific diseases. It is a valuable remedy in all affections of the mucous membranes, whether idiopathic or symptomatic. It is not contra-indicated in judicious doses properly diluted in active inflammation of any organ of the body. It is not a panacea, but it is one of the best modifying remedies now known. If given without discrimination and a great deal of discrimination as to dose, dilution, purity, frequency, associate remedies, diet, etc., it is worse than useless. It sometimes causes severe gastrodynia when pushed too far. Delau does not speak of these latter points, but he will at his leisure we are quite sure. Let it not be imagined the muriated tincture of iron will do as well!

M. Delau has forgotten to mention that the perchloride of iron is an excellent diuretic, and prevents albuminuria, in scarlatina at least; we are convinced of this by experiment on several cases. It has other valuable properties, but we will not anticipate the constant labor of M. Delau, who is justly recognized as the real patron of this remedy. Professor Cruveilhier said one day to him: "My dear Delau, you should be satisfied with having attached your name to the properties of a medicine important to the profession for so many reasons. You will yet reap the fruits of your persevering labor on the perchloride of iron."

**LEHMAN AND ZOO-CHEMISTRY.**—A man in this city voided copious pink urates last February; these lasted several weeks, ceased, occurred again, etc., etc. On the authority of the great organic chemist, we pronounced his case hopeless; that treatment could only be palliative, but not curative. He passed into other hands; for a while he seemed to amend, but did not get well, though rationally treated by our successors; for the last three weeks he has not stood upon his feet, and is now at the very verge of life, and no one has any hope of his recovery.

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A YOUNG LADY was standing upon the edge of the porch of her father's residence in this city, when suddenly she lost consciousness and fell head foremost upon a rough stone pavement, a distance of a little more than six feet. The concussion restored her, and she called for help. There was a cut an inch long upon the forehead quite to the bone, and a bruise at the external angle of the right eye, with some laceration, and injury to the malar arch.

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A DOCTOR of this city has been prosecuted for \$10,000 damages by the father of a little girl, whose thigh being broken was set by the defendant, and united, with some shortening of that extremity. If \$10,000 were recovered for every shortened thigh which has resulted from fracture, and so appropriated, the Pacific Railroad might be built with the proceeds. It is one of the most difficult things in surgery to prevent shortening of the thigh after its fracture, and it is for this object that the thousand thigh-fracture apparatuses have been invented. We know nothing of this case, not even the parties to the suit pro or con, but on general principles we think it is an absurd demand, and that it is altogether probable the attending physician was not in fault.

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**SOLUTION OF THE PERCHLORIDE OF IRON.**—No reliance can be placed upon the therapeutic action of this solution as furnished in this city, according to our experience. Solution of this salt of iron should be made by dissolving the chemically pure crystals in distilled water, and filtering the solution. Thus prepared, a solution of a certain strength will act infallibly in those cases in which its benefits have been demonstrated by repeatedly successful experiments.

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MR. JOSEPH, the case spoken of in another note in connection with pink urates, died a few days after that note was written. This is the third case in this city within our knowledge, in which copious pink urates were observed, that has terminated fatally, although under skillful medical treatment from the onset of the malady, whatever it was. The first case was that of a master brick-mason; died about four months after the urates were first observed, during which time he was under the care of several good physicians. The second was that of a ship-carpenter, who died twenty days after the urates were observed. The third case is that of Mr. Joseph, laborer, mentioned above.

There is now another case in this city, under the care of one of our professional friends, in which pink urates are occasionally copious. He will die in a few weeks beyond a doubt.

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DR. — of this city reduced a fracture of both bones of the fore arm in a Polish woman, aged fifty. It was the fourth fracture at the same place in her arm during a period of four years.

A BOY was thrown down in the street, a few days since, by a double-team drawing a loaded wagon, one wheel of which passed over one of his legs. The boy got up and ran off apparently uninjured.

DR. H. H. TOLAND tied the right common carotid artery on the 21st inst. The patient is doing well.

## Reviews.

A PRACTICAL TREATISE ON FRACTURES AND DISLOCATIONS. By Frank Hastings Hamilton, M.D, Professor of Surgery in the University of Buffalo; Surgeon to the Buffalo Hospital of the Sisters of Charity; Consulting Surgeon to the Buffalo General Hospital, and to the Buffalo City Dispensary. Illustrated with two hundred and eighty-nine wood cuts. Philadelphia: Blanchard & Lea. 1860.

It were idle to expect anything in principles of the treatment, or in facilities of diagnosis, of fractures and dislocations. We have a right to expect a new style of telling the same story. We must have the same facts, the same reasoning from the facts, the same object presented as the end to be attained in this department of surgery; but in each new work we expect all these items to be adorned with a new and fresh arrangement of syntax peculiar to the author: we expect the collateral illustrations of principles will be different, and new, and pertinent. All these reasonable expectations are fulfilled in the work before us. This work is just as good as anything on the same subject heretofore published in Europe or America, and therefore will answer every purpose for a text book. We have only one fault to find with it, which is applicable to nine-tenths of all the literature of the world. It is too large for the mature medical scholar by two-thirds, and too small for the neophyte by three-fourths. For the one, the details are everything; for the other, a nuisance. But still, it is a work which every physician would like to have within reach for reference upon occasion.

We see not much of the dextrine bandage so much, and we believe so justly insisted upon by Velpeau and many other distinguished surgeons. We haven't much objection to "lateral splints" etc., but we think they are very poor and inelegant means to support a bruised and broken limb, or retain fractured bones in a state of immobility, when compared with dextrine bandage, or gutta-percha mouldings, or even plaster bandage. But we are not a "Professor of Surgery," and if we were, Dr. Hamilton's opinion in this matter would still be just equal in value to our own; granted, that we are both unknown to our readers, and neither of us support our methods by comparative argumentation. But Mr. Hamilton has the advantage that he has employed the argumentation, but unfortunately, he does not seem to have accompanied it with the experiment which is the only sure test of the truth of medical logic. He has not employed (at least we do not see that he has) the starch bandage "only when a sufficient time had elapsed to render it probable there would be no sudden accession of swelling in the limb." (p. 64.) "I have even met with examples of compound fractures in which it has seemed proper to



apply this dressing" under the above restriction. Consequently, he has not applied this form of dressing at the most favorable period, which is as near the moment of the accident as is compatible with a careful and accurate diagnosis. As to the "even in compound fractures," those are the very cases in which its superiority, when immediately applied, over all other dressing is most marked and incontrovertible.

Our author naively remarks in the same paragraph above quoted, "In such cases [compound fractures] I have preferred generally to lay the several turns of the roller directly over the suppurating wound in the same manner as if no wound existed, and to make a valvular opening, or window, with the scissors on the following day, in order to allow the matter to escape, after which the valve may be laid down and stitched, or the piece may be removed entirely, and a new piece of bandage drawn closely around the limb at this point. This may be repeated once or twice daily. If an opening is left by the roller, and no additional bandage is laid over it, the margins of the wound soon become oedematous and protrude, making an ugly-looking and ill-conditioned sore."

We do not believe any one ever put on a starch bandage the second time, any other way; if he did, he was too slow of perception for the successful practice of this department of surgery. We wish here to say again, apropos of starch and camphor bandages, what we have had occasion to say several times already, that there is no principle in physiology, in our humble Occidental opinion, by which it can be shown, that a camphorated dextrine roller applied with equal and uniform pressure from the end of the extremity upwards, could, *per se*, do injury, or fail to be beneficial in preventing not only engorgement of the limb, but also of tendency to engorgement: that is, other things equal it modifies favorably the pathological tendency in simple and compound fractures, *when applied immediately*, by supporting the paralyzed vessels and muscles, giving the muscular structures a *point d'appui*, and thus preventing the torment and insanity caused by the most agonizing vigilance of instinct, which instinctive organic vigilance persists even in the absence of perfect consciousness; in preventing the accession of excessive inflammation by preventing tumefaction which is the culmination of inflammation, in the facility, which it permits, for the movements of the patient, which can be performed without caution or pain as soon as the roller is hardened. It is a mistake to suppose this roller allows no tumefaction, and thus endangers the supervention of gangrene. It is applied wet, at the moment of fracture, before much swelling has occurred; the bandage on drying extends a little, (a dry roller is longer than the same roller wet) and if the limb is disposed to swell, it does so, *pari passu*, with the dessication of its envelope. But often, indeed generally, if the roller has been properly applied, and the limb kept in a horizontal or slightly elevated position, the latter will be found, at the end of the first twenty-four hours, but very slightly swollen, indeed, the apparel will frequently be found loose enough to admit the gliding of a No. 6 sound between it and the skin.

It is especially applicable to compound fractures, as it prevents the accession of currents of air and the annoyance of flies. When suppuration is established, a window may be cut out, through which the wound can be cleansed daily in this opening; after the cleansing, a compress equal in dimensions to the block removed, may be inserted and confined with a few turns of a dry roller.

The starch bandage obviates all need of extension and counter extension after it is once dry, because it moulds itself into the inequalities of the limb, thus preventing effectually and without pain any shortening, or elongation, or twisting of the limb.

We have had some experience both in civil and military practice in the application of various apparels to fractured limbs, and we now find no use

for any fracture apparatus for the extremities, excepting those we extemporize out of gutta percha and camphorated dextrine rollers. We have said more about this than we intended to, because starch bandage in fractures and dislocations (of the limbs) of all descriptions is one of our hobbies, but still we will do our author the justice to let him tell in his own words, the circumstances under which it may be used. It will be seen by this, that under *his own* supervision he has considerable affection for this species of dressing, but is afraid to trust it to the *canaille* of the profession, and, *entre nous*, he is quite right.

"Immovable dressings are not only liable to become too tight as the swelling augments, but, on the other hand, the surgeon may omit to notice that as the swelling has subsided it has become loose. Portions of the limb may vesicate, ulcerate, or even slough, without the knowledge of the surgeon. If, however, the bandages are frequently opened and all the proper precautions are taken, it is possible that these accidents may also be avoided; but unfortunately experience has shown that they have not been avoided in too many instances.

"The cases, then, to which this apparatus seems to be adapted, are a few examples of transverse or serrated fractures in which the bones have not become displaced, and in which little or no swelling is anticipated; and in certain fractures which were originally more complicated, but in which a partial union, and the subsidence of the inflammation, have reduced them to a more simple condition; and especially in cases of delayed union. If now the dressings are applied carefully, the bandage being only moderately tight, and a portion of the extremity of the limb is left uncovered so that we may observe constantly its condition, and at proper intervals the apparatus is opened completely in order that we may subject the whole limb to a thorough examination; in such cases as we have now indicated and with such precautions, we admit that the "apparatus immobile" constitutes an invaluable surgical appliance, and one of which no surgeon can well afford to be deprived."

His chapters on dislocations of the femur and humerus are copious enough, as to the literature of these dislocations, but the best, and most lucid, and practical essay on the dislocations of the shoulder and hip joints, and their reduction by manipulation, he has entirely ignored. We allude to the excellent monograph of Dr. Moses Gunn, of Detroit, Michigan, published two or three years ago.

Finally, we hope in the next edition of this valuable contribution to American medical literature, the distinguished author will lay aside a little of his modesty (by the way a most commendable virtue in this age of impudence) and treat us to a little more positivism, tell us categorically his own opinion, his own method, his own preference, instead of keeping in the shadow of antecedent names, whose owners, altogether likely, were less capable of arriving at exact conclusions, and the best solution of disputed points than our author himself.

#### THE DISEASES OF THE EAR: THEIR NATURE, DIAGNOSIS, AND TREATMENT.

By Joseph Toynbee, F.R.S., Fellow of the Royal College of Surgeons of England, etc., etc. With one hundred engravings on wood. Philadelphia: Blanchard & Lea. 1860.

OF all means of obtaining immortality, that of publishing a book on the diseases of the ear is the most hopeless. He must be a brave man who will set down and deliberately write a book of 500 great octavo pages, on diseases of the ear. The profession is under obligations to Mr. Toynbee for this labor of fraternal affection. We here see at a glance, what diseases of the ear are curable, what incurable, what ones may be alleviated, and what conditions

of the organ of hearing are absolutely without remedy by medical art. We have 100 illustrations, well executed, which considerably aid our appreciation of the text, although the latter is so clear and definite as to scarcely need illustration.

After all that has been done and written, persons that are "hard of hearing" from any cause except mechanical obstruction, or acute inflammation, are likely to remain so. The aural apparatus is too delicate an organization, to recover from any organic lesion, except in rare and exceptional cases; but still it is the duty of the profession to keep trying. This work of Mr. Toyabee will greatly assist us in diagnosis and treatment of diseases of the ear and its appendages. Below we give a sample of the author's style and care in observation.

"I was called into the country in great haste in the spring of 1856, to see a nobleman, æt. 70, who was suffering from an attack of intense inflammation of the mucous membrane lining the left tympanic cavity. At the time of my seeing the patient, the inflammation had extended internally as far as the labyrinth, and the power of hearing was destroyed. The only means of communication with my patient was by writing. Having but slight hope of doing anything towards the improvement of the hearing power of the left ear, I turned my attention to the right, the drum of which had, I found, been inflamed and damaged in early life. I proposed, amid opposition at the supposed utter uselessness of the experiment, to try the effect of a loud voice spoken into the right ear. The result was decided, the sound of the voice was distinctly heard, and some words were understood. Feeling that the nervous system of this ear was lying torpid, from the circumstances that ordinary sonorous undulations had not been able to reach it through the diseased condition of the membrane tympani and mucous membrane of the tympanum, and also from the weak state of the nerve itself, I determined to try a plan of treatment having a twofold object,—the excitement of the nervous apparatus of the ear by the healthy stimulus of sonorous vibrations, through the use of ear-trumpets, and an improvement of the conditions of the drum, as also of the mucous membrane of the tympanum, by remedial applications. The former of these objects was attempted at once with a most satisfactory result, for the hearing power gradually increased. In short, by the means in question, the latter of the two being principally gentle counter-irritation, the patient's power of hearing in this ear, which had been so defective during sixty years that its faculty was considered "lost," became, in the course of eighteen months, so improved, that for a long time previous to his death, he could hear a voice speaking near to the ear, and with the aid of a trumpet on his table could carry on a conversation with persons sitting in different parts of an ordinary sized room. In this case I am confident that no good would have resulted from the treatment, if the nervous apparatus of the ear had not been stimulated at the same time by the influence of sounds; and my experience tells me that hundreds of persons are living with one ear supposed to be perfectly deaf, and in reality useless, but which might be made very serviceable, were the sonorous undulations conveyed to it by artificial means."

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AN EPITOME OF BRAITHWAITE'S RETROSPECT OF PRACTICAL MEDICINE AND SURGERY. In Six Parts. By Walter S. Wells, M.D. Published for the author, by Charles T. Evans, New York.

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# THE Pacific Medical and Surgical Journal.

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## Selections.

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### On the Poisons found in Alcoholic Spirits.

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BY A. A. HAYES, M.D., STATE ASSAYER.

(Communicated for the Boston Medical and Surgical Journal)

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FREQUENTLY within the past few years, the public journals have called attention to the existence of poisonous bodies, especially strychnine, in the spirits produced from grains, and no little excitement has grown out of such announcements.

A somewhat extended series of analytical observations on these spirits, from many sources, has convinced me that no good reason for such a statement could be found, and my conclusion has been supported by the testimony of those who are opposed to the manufacture, but who frankly admit that no case has ever fallen under their notice, at the places of manufacture, which would lead to even an inference, in regard to the adding of any deleterious body to the distilled spirits. The addition of non-volatile bodies to the fermented worts, if made, would not contaminate the spirits distilled from them, and it is probable that the supposition in relation to the use of strychnine for the purpose of increasing the product of whiskey, arose from the *ruse* of a foreman, who wished to conceal the particular characteristics of his ferments in daily use. In low places where such spirits are retailed, drugs which produce narcotic effects, or temporary frenzy, are doubtless resorted to in special cases, while the infusing of pepper or salt is not a very rare occurrence.

Cases of sudden poisoning by the low-priced, common spirits frequently occur, which are not necessarily referable to poisons of foreign origin. Some

of the so-called *fusel oils*, produced in the fermentation of mixed grains, either sound or after they have become injured from exposure, act as powerful poisons, and in some states of depressed action of the human system, fatal effects would doubtless follow from the introduction of such oils into the stomach.

As a general statement, the spirits produced in this country to serve as beverages, are remarkable for their purity and freedom from any substances which careful rectification can remove. When, through age and suitable exposure, the oils contained in them have passed into ethereal bodies and thus ripened the spirits, they become equal, in soundness and purity, to any products imported from abroad, and far less deleterious than most of the so-called brandies of the present time.

There is, however, present in the newly-distilled, and, in most cases, in the older spirits, a source of danger, which, so far as I can learn, has been overlooked, or possibly attributed to criminal intention, which should be publicly known, and is of especial interest to the medical profession.

Newly-distilled spirits, of the most common kind, often contain *salts of copper, of lead, or tin*, derived from the condensers in which the vapors are reduced to a fluid form. The quantity of copper salt contained in the bulk usually taken as a draught, is sufficient to produce the minor effects of metallic poisoning; the cumulative character of these poisons may even lead to fatal consequences. With a knowledge of the fact now stated, instead of resting on a supposition of the existence of an organic poison in the spirits which have caused sickness, the physician may notice the symptoms of metallic poisoning in persons addicted to the habit of consuming newly-distilled spirits, and interpose his aid in preventing the fatal termination of vicious indulgence.

Since I first demonstrated the fact of the frequent occurrence of these metallic salts in the more recently manufactured spirits, the investigation has taken a wider range, and the results have proved that as all spirits at one time were new, so with few exceptions—arising from peculiar rectifications—most spirits have been, or are, more or less contaminated by metallic compounds. Old, or more matured spirits have generally lost every particle of the salt once held in solution. Changes in the organic solvent have caused the deposition of the metallic compound, accompanied by the organic matter from obvious sources, and in such spirits the metallic oxide is always found—if it has been present—in the dark-colored matter which has been deposited at the bottom of a cask at rest. This dark deposit has the appearance of, has been mistaken for, charcoal, detached from the charred staves of the casks in which the spirits have been stored.

Of this dark deposit every sample has, on examination, afforded abundance of copper, copper and tin, or copper and lead, even when taken from the finer qualities of foreign spirits.

Observations have been made on the nature of this change from a soluble to an insoluble state. Samples of new spirits have been kept in glass vessels until the whole metallic salt has fallen in dark flocks, leaving the clear fluid free from any metallic compound and perfectly pure.

It appears, therefore, that matured spirits lose their poisonous impregnation during the time necessary to adapt them for use as beverages, and that while the clear, transparent fluid contains no metallic impregnation, a turbid though ripened spirit may prove deleterious through its *suspended* metallic compounds.

In order to avoid the poisonous effects of these salts, perfectly well-ripened and clear spirits only should be used in the preparation of medicines, and when ordered as restoratives, no new or turbid alcoholic fluids should be allowed to enter the room of the patient or hospital. As a further elucidation of this subject, the following more strictly chemical remarks are offered.

The origin of these salts is connected with the production of acids, as well as alcohol, in the fermenting vats. When the wort is subjected to heat in the still, acetic, butyric and other acids rise with the vapor of alcohol, and pass into the condenser, now most commonly made of copper, with masses of solder containing lead. At the instant of condensation, these acids exert a power of corrosion on the metals quite unsuspected, and the salts formed dissolve in the spirit. Where condensers of pure tin are used, no copper salt is found, and a little tin salt takes its place.

With the vapor of dilute alcohol some vesicular vapor of the wort is carried forward, and the dextrine which can be found in the spirit; another portion of soluble organic matter is abstracted from the wood of the cask, and this is often tannic acid. In the subsequent chemical changes, these organic compounds unite with the salts, and fall in the form of a sub-granular, dark matter, seen in colorless spirits of all kinds. In detecting the metals held in solution, the extract obtained, after evaporating the spirit, must be destroyed, as usual in toxicological testing, and an acid solution of the oxide obtained, or the extract may at once be mixed with carbonate of soda, and the metal reduced by the blowpipe flame. When the deposit is the subject of trial, the metal or metals appear on fluxing with carbonate of soda, in the inner flame produced by the blowpipe, on charcoal.

16 Boylston St., Boston, 17th Sept., 1860.

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**IODINE**, according to M. Boinet, preserves, cures, strengthens, and modifies the constitution, removes diathesis, and impresses a new energy in the organism. Iodine, according to M. Rilliet, weakens, deteriorates, wastes, destroys, atrophies, and kills!

Last year M. Beau discovered that lead was an excellent remedy for phthisis. M. Broeckx, of Antwerp, has tried the mineral extensively, and has found it worse than useless!

M. Chatin lately informed the French Academy, *a-propos* of iodine, that Coindet had by its use reduced so many women to the condition of Amazons, and had brought such a number of men into the state described by M. Ricord under the term "haricoccele," that he dared not show himself in the streets of Geneva, through dread of suffering the martyrdom of St. Stephen.—*Brit. Med. Jour.*

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**BIRTHS AND DEATHS IN PHILADELPHIA, IN 1859.**—The total number of births in this city during the last year was 14,832, of which 7,669 were males, and 7,163 females.

The number of deaths within the same period was 9,742, of which 5,160 were males, and 4,582 were females. Of the above, deducting the stillborn, of whom there were 658; there were males, of 20 years and upwards, 1,917; under 20 years, 2,508; of females, of 20 years and upwards, 1,699; under 20 years, 2,249. The above list comprises 1,505 deaths by pulmonary phthisis; 544 by inflammation of the lungs; 520 by convulsions; 408 by cholera infantum; 366 by marasmus; 267 by typhoid fever; 234 by dropsy of the brain; and 330 by inflammation of the brain. The mortality from cancer was 132.—*N. American Medico-Chirurgical Review.*

## European Correspondence.

GLASGOW, September 11, 1860.

### *Editors of Philadelphia Medical and Surgical Reporter :*

GENTLEMEN :—In my present letter, I shall make a few observations upon the existing condition of the medical profession in England. There is not, as with us, one class only of medical men, who alone are recognized as regular practitioners ; but, instead of that, there are three or four grades, to only one of which the title of M. D. is annexed. This unnecessary subdivision causes confusion and jealousy, and many are in hopes that a simpler system will, before long, be adopted.

What may be called the lowest grade, consists of those who have the license of the Apothecaries' Hall. These are called Apothecaries ; but, instead of confining themselves to Pharmacy, they practice medicine, and have a legal right to prescribe and to charge for their prescriptions.

This strange state of affairs arose from the circumstance of the comparatively small number of Doctors of Medicine, and their high scale of charges, which caused most persons to consult Apothecaries in slight cases of sickness. In former times, the Apothecary, although he might prescribe, had no right to charge, and he therefore was obliged, in order to obtain a fair remuneration for his trouble, both to give a great deal of medicine and to charge very high for it. But the evil bore in its own nature the germs of a remedy.

From having so much practice thrown into their hands, they very naturally adopted a higher standard. By degrees, they have come to be a recognized body, and are no longer obliged to overdose, or pretend to do so, in order to get their fees. A regular examination in *Medicine*, as well as in *Pharmacy*, must be undergone to be admitted into their ranks.

The SURGEON, as the term is employed in England, means a man who has the license of the College of Surgeons. The studies for this diploma, if it may be so called, are usually carried on in some hospital, and in a school connected with it, which school has itself no power of conferring any degree whatever, but serves only to prepare the student for the examination by others than its own professors.

The great mass of the practitioners of England have the diplomas of both the Apothecaries' Hall and the College of Surgeons. They are called "*General Practitioners*."

A still higher grade is formed of the Licentiates of the College of Physicians, and to these the title of Doctor or Physician is given, although they have no right to add "M. D." to their names. This right belongs solely to the graduates of a University—that is, of Oxford, Cambridge, or of University College, London, and their number is consequently very limited, although the M. D.'s of Scottish or Irish Universities are also recognized. In Scotland, the Universities of Glasgow, Edinburgh, and Aberdeen, can confer the degree, and in Ireland it is conferred by Trinity College, Dublin, and by the Queen's University, which has Colleges at Cork, Limerick, and Belfast. In Scotland, the same constitution of the medical profession does not exist—at least, not to the same extent ; for a much greater proportion of the practitioners take the degree of M. D. from some one of the Scottish Universities.

A peculiarity worth mentioning in the constitution of the profession in England, is, that the M. D.'s have no legal right to charge for their services, and instead of sending a bill at the end of a year, or six months, they are paid at every visit, the regular charge being a guinea. In the country, however, I heard of one instance in which a physician visited even at a distance

for much less. The fact was mentioned in a manner which showed that the action was considered unprofessional.

I shall now give a brief account of one of the Scottish Universities, viz: that of Glasgow. It is a large building, built in a very ancient style, in three quadrangles, and contains a number of lecture rooms, some of which are devoted to medical lectures exclusively. This was not the case in one of the Queen's colleges which I visited in Ireland, where lectures on Logic, Latin and Surgery were delivered in the same room. The professorial chairs are, as far as relates to medicine, divided just as in the University of Pennsylvania, with the addition of a chair of Botany, and one of Forensic Medicine. There is also a Waltonian lecturer on the eye, William Mackenzie, who is also a surgeon of the Glasgow Eye Infirmary, and with whose name all your readers are of course familiar.

The chair of Natural History in the University is ably filled by Henry D. Rodgers, LL. D., a brother of the distinguished Professor of Chemistry in the University at home.

First in the list of officers of the Institution comes James, Duke of Montrose, Chancellor. There is also a rector, the Earl of Elgin. These officers are not much more than nominal, indeed, I was informed that the whole duty of the Chancellor consisted in delivering an address at stated intervals.

I visited in the University the Hunterian Museum, (that of William Hunter.) It is of considerable size, and additions are from time to time being made to it, particularly in the department of embryology. The strictly medical portion of the museum is in the basement of the building appropriated for it, while on the main floor, there is that part relating to Comparative Anatomy, interspersed with curiosities of various kinds, such as old books, old paintings, &c. I saw the cabinet of *Materia Medica* of the Professor of that branch, but it was very insignificant and not worthy of notice.

What interested me more than the University was the Hospital, or (as it is called) the Glasgow Royal Infirmary, which contains 600 beds, and to which a large additional building, now in process of erection, will soon be added. It is a large stone building, five stories high, but inside, the favorable impression made by the handsome exterior, is, in a great measure, done away with, for the entries are narrow and the wards are rather crowded. I was surprised to find that patients with contagious diseases were received, although kept in a separate part of the building from the other patients. This part of the house the physicians distinguish by saying it is for the *fever patients*; for although the distinction between typhus and enteric fever is beginning to be recognized even here, yet in ordinary conversation the term fever means typhus.

A new thing to me in the Hospital was the lecture room for post mortem examinations, a room which would contain one or two hundred students. I saw there a printed abstract for the guidance of the student in making post mortems, which was headed "Pathological Report," and had printed on it the name of all the parts which it would be at all necessary usually to examine, with blank spaces opposite, to be filled up by the description of the case under examination.

I noticed in the Hospital only one case of interest among the few that were shown to me. This case was one of excision of the head of the femur for anchylosis. After the operation great difficulty had been found in preventing protrusion of the end of the femur, and it had only been overcome at last by restoring the limb to its former bent position, making counter-extension at the perineum, and extension by means of a heavy clock-weight attached by a rope to the knee, the rope passing over a roller on the side of the bed. Abscesses were burrowing down the thigh, and had been opened in several places, but I was told that the man was in better condition than before the operation.

Very truly, yours,

M. D. ABROAD.



## On Convulsive Diseases and Epilepsy.

BY CHARLES BLAND RADCLIFFE, M. D.,

Fellow of the Royal College of Physicians, London.

IN my last lecture I endeavored to show, as far as was possible in the time, that it is necessary to adopt a new theory of muscular motion. I endeavored to show that a fundamental change in this matter is absolutely demanded by many of the facts which have come to light during the past ten or twelve years, and chiefly by the messages which may be said to have been telegraphed along the three miles of wire which enter into the coil of a galvanometer, sure as that which was then upon the table. For what are these messages? One is, that there are *electrical currents in living muscle and nerve*. Another is, that rigor mortis does not occur until the *final extinction of these currents*. A third is, that *these currents are weakened in ordinary muscular contraction*. A fourth is, that *contraction is produced when the nerve-current is weakened by the action of a galvanic current upon nerve*. A fifth is, that *contraction is not produced when the nerve-current is strengthened by the action of a galvanic current upon nerve*. In a word, the needle of the galvanometer appears to show that muscle elongates under the action of the muscular and nerve currents, and that muscle contracts when this action is weakened or extinguished.

I pointed out also, as in keeping with these facts, that muscular contraction is connected with the *discharge* of ordinary electricity, and not with the charging or charge.

I endeavored to show, further, that there are no sound reasons for supposing that blood and nervous influence produce contraction by acting as stimuli to a vital property of contractility, and that there are many grounds for believing that these agents act upon muscle in the same way as electricity, antagonizing contraction, not causing it—antagonizing contraction, possibly, by means of electricity—nervous influence by the nerve-current—blood, by keeping up the muscular and nerve-currents, for it is easy to suppose that these currents may be kept up by the respiratory or *chemical* changes which are produced by blood in muscle and nerve.

As to the rest, I endeavored to show that there was no need of a vital property of contractility, and of the doctrine of stimulation founded thereon, to explain certain other facts which must be accounted for by any true theory of muscular motion. I endeavored to show, for instance, that the fact of muscle undergoing no change of bulk in contracting, the gain in breadth being precisely equal to the loss in length, has its exact parallel in the change which a bar of iron undergoes in passing out of the magnetic state—that contraction under “mechanical irritation” may be nothing more than the natural effect of the discharge of secondary currents, which currents are induced by mechanically interrupting the nerve and muscular currents;—that muscular waste is proportionate to muscular action, not because contraction is the sign of functional activity, but because a given amount of waste is necessarily incurred in that renewal of the muscular current which is necessary to relax the muscle after each contraction—that the will may *act* in voluntary contraction by suspending the muscular and nerve-currents; that rigor mortis, which is utterly unintelligible on the accepted theory of muscular motion, may be the natural result of the action of the common molecular attraction of the muscular tissue upon the final dying out of the muscular and nerve-currents.

To bring forward all the arguments belonging to so comprehensive a subject within the space of one lecture was manifestly impossible, even with the additional moments which you, sir, so graciously placed at my disposal; and thus I was obliged to leave much unsaid. I said nothing, for instance, about the rhythmical movement of the heart and other muscles, though I might have found in the theory a key to their physical interpretation, and in them no small confirmation of the theory. I said nothing about the parturient contractions of the uterus, though in the theory I might have hoped to have found a way of explaining how it is that these contractions begin at a certain time, and continue until the completion of birth. But though obliged to leave much unsaid, I hope I was able to say enough to show that a fundamental change is necessary in the theory of muscular motion, and to prepare the way for what I have now to say upon the theory of convulsive diseases.

Epilepsy is at once the grand type of convulsive diseases, and the key to their interpretation. Epilepsy, however, is a name which indicates much less than it did formerly. Thus, it does not indicate the epileptiform convulsion which is connected with certain positive diseases of the brain, with fever, with uræmia and other retained excretions, with "irritation" in the gums and elsewhere, or with the moribund state. And it is difficult to say precisely what it does indicate; for, as our diagnosis gains in exactness, epilepsy changes from a special malady into a mere symptom, or congeries of symptoms. At the same time, it is convenient to take an ideal type of epilepsy, and regard it as a special malady; for there are numberless cases, in which, in their earlier stages at least, it is very difficult, if not impossible, to recognize the disease of which the convulsion is merely a symptom.

What then, I would begin by asking, is the theory of simple epilepsy? Upon which theory of muscular motion is it to be based? And first, what are the facts?

An epileptic will often say—never oftener than upon the very eve of an attack—"I am quite well," and many are ready enough to echo what he says; but he and they have little right to say so. Where the malady has not made much progress, there may be a cheerful countenance, a sharp digestion, a firm limb, and at the first glance it may not be easy to say what is wrong; but, even in this case, there are always certain features which are incompatible with true health and strength. In many instances there is a want of fire in the countenance, and a dilated and sluggish state of the pupil, which point to the brain as lacking in energy; and, in keeping with these signs, it is found on enquiry that the memory is more or less treacherous, the ideas more or less indefinite, the powers of attention more or less incapable, the imagination more or less dull, the temper more or less irritable, the will more or less feeble, the character more or less undecided. It is, no doubt, common enough to meet with epileptics, who, without any want of candor on their part, will maintain that their minds are free from all infirmity; but if care be taken to examine their history, it will always be found that they and their friends have very different opinions upon this point.

In very many instances there is a marked disposition to tremulousness and cramp; thus in upwards of seventy cases which fell under the notice of my friend and colleague, Dr. Reynolds, these symptoms occurred at one time or other, and in one form or other, in more than half of the whole number.

In very many instances, again, if not in all, the hands and feet are cool or cold, the pulse is weak and slow, and a feeling of chilliness is almost habitual. Indeed, so far as my own experience extends, the powers of the circulation are always very defective in *ordinary epilepsy*.

In confirmed cases, these general features are so marked as to be altogether unmistakable. Not only are the pupils dilated and sluggish, but the

under eyelids have become puffy and coarse. Often, moreover, the complexion has acquired a dull tinge—a change which appears to depend in part upon an habitually bloodshot state of the skin. At any rate, this bloodshot condition is rarely absent, and where it is most marked, as about the forehead and eyelids, it is often accompanied by numerous spots of ecchymosis of about the size of a pin's head. The torpid features are now rarely lighted up with the fire of feeling or thought, the senses are duller than ever, the memory more treacherous, the ideas more confused, the power of attention more distracted, the imagination more drowsy, the temper more uneven, and the will more incapable. At this time, also, there is, for the most part, little of that fine susceptibility of feeling which is necessary to enable one to be miserable about anything.

The change for the worse is particularly marked after the fit. Indeed, at this time the senses may be so blunted, and the mind so clouded and confused, that the features of the epileptic may become blended in those of the demented person. Or symptoms of mental aberration may show themselves, and transform the epileptic for the time into the lunatic. The fits, also, may recur so frequently, that the mind may never have the chance of clearing up in the interval, and in this way the general features of the convulsive malady may never cease to be confounded with those of dementia or insanity. Not unfrequently, also, there is the gravest degree of mental infirmity from the very first, and instead of ending in dementia, the history of the epileptic may begin in idiocy. Indeed, epilepsy is so frequent an accompaniment of this saddest of all conditions, that it can scarcely be said to be an accident.

The signs of the approaching paroxysm are very variable. The patient himself will say, and say truly, that the fit takes him by surprise; and certainly the signs of danger are not those which are likely to arrest his attention. These signs also are very apt to vary in the same person.

As the time of danger approaches, the patient may become unusually fidgetty, irritable, moody, forgetful, absent, or drowsy; or he may sleep restlessly, grinding his teeth, snoring or snorting, dreaming about things which distress or terrify him, or even somnambulizing; or he may have a disagreeable feeling of tightness about the throat, with cramps or tinglings in the limbs and elsewhere; or he may be unusually "shaky," or he may be annoyed with shudders of a very disagreeable and violent character.

Another sign of danger may be giddiness or headache; but, so far as the latter symptom is concerned, I should not be disposed to lay much stress upon it as a warning in simple epilepsy.

Occasionally, the pupils may be more dilated and sluggish than usual, or one pupil may be more dilated and sluggish than the other; or the eyes may be rotated in a peculiar manner.

Usually, so far as my experience goes, the pulse may become feebler than it was before; and not unfrequently the patient will complain that nothing will warm him or keep him warm; or he may sigh in a way which shows that he is not breathing as freely as he ought to do; or, if asleep, the breathing may at times become so imperceptible and insufficient as to suggest the idea of death. The breathing fails in this remarkable manner before the fit in a patient at present under the joint care of a medical practitioner in the country and of myself, and we can both testify as to the fact.

Later still, there may be certain vague and undefinable sensations or movements, very varying in their character, but all comprehended under the term *aura*—sensations of pain, numbness, tingling, and a feeling as of cold vapor, movements of shuddering or spasm, beginning in a distant part, as in the hand or foot, and traveling towards the head. In other words, there may be symptoms which, as Dr. Watson thinks, are in some degree analogous to *globus* in hysteria, or to the numb and tingling feelings which are the precursors of paralysis and apoplexy.

In some cases there may be special premonitions. In one of my patients the fit is invariably preceded by an intense feeling of hunger. In another patient, since insane, a little blue imp made its appearance, and grinned and mocked at him as he lost his consciousness. In a third, a guitar seemed to be roughly grated close to the ear. But these signs are of little value, for they are only perceptible to the patient, and not even to him until he has ceased to be able to bestir himself.

Last of all, there is a sign which is very difficult to catch, and this is the death-like pallor which overspreads the countenance immediately before the fall. M. Trousseau called attention to this sign five years ago as one which is diagnostic of epilepsy; and, since that time, I have seen it in every instance in which I have seen the fit from the very beginning. "Il est une signe," says M. Trousseau, "qui se produit du moment de la chute, et qui n'est imitable pour personne; c'est la paleur tres prononcee, cadaverique, qui couvre pour un instant la face de l'epileptive. Nous ne le voyons pas, parceque nous arrivons toujours trop tard, alors que la face est deja d'une rougeur tres prononcee." M. Delasiauve has also noticed the same phenomena in several cases.

In the severest and most characteristic form of the paroxysm, the patient utters a peculiar choking noise, or a sudden and startling cry, and at once falls down convulsed and insensible. The convulsions are usually more marked on one side of the body than the other. They drag the mouth towards the side which is most affected, and twist the face in the opposite direction until the chin may press upon the shoulder. They push forward the tongue, and crush it between the teeth. They clasp the thumb upon the palm, and hold it down with the force of a giant. They seize the walls of the chest and abdomen, and prevent the possibility of breathing. They stiffen the limbs, so that the joints cannot be bent without some risk of breaking the bones. In some instances, they even take hold of the bladder, the bowel, or the seminal vesicles, and expel the contents; in others they may be so violent as to bite off a large portion of the tongue, to break the teeth, or to dislocate a limb. At first, it seems as if the spasms would never relax; but afterwards they are separated by intervals, which grow wider and wider as the paroxysm draws to an end. The convulsions, that is to say, are tetanoid at first—clonic afterwards.

At the instant of the fall, a corpse-like paleness overspreads the countenance; a few instants later, and the livid, black, and bloated head and neck, and the hissing, gurgling, choking sounds proceeding from the throat, suggest the idea of a person struggling under the bowstring of some invisible executioner. At times, however, the signs of suffocation are absent, and the ghastly pallor of the beginning remains throughout.

When the fit is at its height, a quantity of frothy saliva is usually blown or puffed from the mouth, and this is not unfrequently reddened with blood, if the tongue or cheek happens to have been bitten.

If the eyelids are open, the eye is seen to be projected and distorted, with the pupil dilated to the utmost, and absolutely insensible to light. As a rule, however, the eyelids would seem to be closed; and well it is that they are so, for it requires some nerve to meet the hideous stare of the epileptic eye.

All this while, it is usual for the hands and feet to be cool, and bedewed with clammy perspiration. Except the head and neck, indeed, the whole body is cooler than natural, and any little additional warmth of the head and neck would seem to be simply due to the fact that their vessels are more distended with venous blood.

The other and less obvious features of the paroxysm are in keeping with these.

At first, it may be difficult, perhaps impossible, to feel the pulse, and the heart acts very feebly; but if the fingers of one hand be kept upon the wrist, and the other hand be placed upon the bosom, it is found that the pulse rapidly acquires a force and fullness which it never had in the intervals between the fits, and that the heart beats more and more tumultuously and violently as the pulse rises. In some instances, however, the pulse may remain almost silent, and the action of the heart be extremely feeble from the beginning to the end.

From the first all consciousness is happily suspended — this is our only consolation in so sad a spectacle — and the most powerful stimulants fail to evoke any sign of action in the dormant mind. The water which may be poured upon the face (with few exceptions) causes no blinking in the eye if this be open and staring; the fire upon which the patient may have fallen may char the flesh without causing a single pang.

After continuing for two or three minutes, which seems drawn out to hours, the convulsions cease, and the patient is left with all his muscles unstrung, like a person dead-drunk, or struck down by apoplexy. The lungs, no longer restrained by the suffocating spasm of the earlier part of the fit, resume their play with deep inspirations, and then act with loud and stertorous breathings; and as the respiration rights itself, the veins of the head and neck become unloaded, the natural color returns to the surface, and presently the patient wakes to an obscured and troubled consciousness. "Je suis brisé," Calmeil tells us were very often the first words of the returning epileptic at the Saltpetriere or Charenton. The time during which the patient lies after a fit before awaking is very variable, but (except in a first attack) it is rarely more than half an hour, and it may not be more than two or three minutes.

This is the usual, but by no means the invariable course of the fit. Often, indeed, the attempts at rallying may be very imperfect, and fit after fit may recur for a long period without any interval of waking; and occasionally all rallying may be prevented by death.

After waking, there are generally some symptoms of reaction in the circulation, but in simple epilepsy these are never marked. They may be enough to give a dull flush to the cheek and a little fullness to the pulse for a short time after the patient wakes; but, as a rule, they cease when the coma ceases, and coma is never much prolonged in simple epilepsy. Usually the patient is headachy and exhausted, listless and stunned, moody and irritable, until a night's rest has enabled him to recover the balance of his shaken nervous system. The jaded countenance also tells plainly of the past struggle, even though it may present none of those numerous and minute dots of ecchymosis about the eyelids and upon the forehead which are such unequivocal signs of a severe attack of epilepsy.

As time goes on, the mental faculties recover more and more imperfectly, and more and more tardily, and at last their habitual state may be one of pitiful fatuity from which no single ray of the Divine principles beams forth. Or the moodiness and irritability which often follow attacks may become more and more marked, until at last they merge into attacks of downright mania. Or symptoms of paralysis may make their appearance. Or death may happen in a fit, or shortly afterwards. The natural tendency of epilepsy is assuredly towards dementia; and dementia is the frequent doom of the epileptic, if his disorder be unchecked and life prolonged sufficiently; but at the same time it is possible for an epileptic to live many years, and to have many fits, without losing the powers which are necessary to render him an agreeable and serviceable member of society. When death happens, it appears to be, most generally, from exhaustion in the period of prostration immediately following the paroxysm.

But the symptoms of epilepsy are not always so startling as have been represented, and in some instances they may be so softened down as to be recognized with difficulty.

In the slightest form of the malady, the patient pauses suddenly in the midst of anything he may happen to be doing or saying at the time, his countenance becomes pale and blank, his lungs cease to play, and, after a moment of absence or giddiness, he is himself again. His memory has kept no record of this sad passage in his history, and if it had escaped the notice of others he might remain in happy ignorance of it. Or, in addition to these symptoms, a lurid flush may succeed to the paleness of the countenance, the veins of the neck and forehead may start out in prominent relief, the face may turn slightly towards one of the shoulders, and there may be some convulsive twitching in the face and neck and arms. In such a case there is no scream or cry, no fall, no bitten tongue, no foam at the mouth, and at most there is only some obscure gurgling in the throat, some staggering, and some slight moistening of the lips with saliva. In such a case the convulsive movements are very partial, rarely extending beyond the face, neck, or arms, but in some few instances the whole frame may be agitated by one or two violent convulsive shocks. This state of giddiness and absence and partial spasm may be followed by fatigue, loss of memory, confusion of thought, depression of spirits, or irritability of temper, and at times it may end in drowsiness or actual sleep; but usually recovery is almost instantaneous. At the same time there is reason to believe that dementia is a more likely as well as a more speedy consequence in this, *le petit mal*, than in ordinary epilepsy, *le grand mal*.

In some of these cases, moreover, it would seem not only that the patient does not cry, or fall, or suffer from general convulsion, but that the state of intellectual eclipse—the most characteristic symptom of epilepsy—is far from complete. Esquirol says, “il est des accès dans lesquels on n’observe pas la perte de connaissance;” and M. Herpin directs particular attention to these cases. Cases like these are common enough in certain chronic diseases of the brain, as meningitis or tumor; but in simple epilepsy they are by no means common, if other proof be wanting than the mere assertion of the patient. I have met with four such cases, and have put them on record in various places.

The morbid appearances after death from simple epilepsy are necessarily very obscure, if the case has really been one of simple epilepsy, and not one of epileptiform convulsion connected with some special disease. In cases fatal during the fit the brain has been found to be congested; but this appearance is clearly owing to the mode of death, and it is allowed to be so. In cases again, where epilepsy has been complicated with insanity, the brain or its membranes may present various signs of inflammation, or of changes more or less akin to inflammation; but these signs are clearly referable to the mental disorder, and for no other reason than this—that they are as common, or more common, in insanity without epilepsy. In other cases there are signs of degeneracy, such as pallor of the gray matter, softening, induration, atrophy, dropsical effusion; but these are the very signs which belong to the demented state. It is this very fact, however, which furnishes some grounds for supposing that signs of this character may have something to do with epilepsy. It does so, because the demented state is intimately connected with convulsive disorder; for if a demented person be not epileptic, he is almost sure to be affected with palsied shakings, or cramps, or spasms, in one form or another. In other cases, again, the skull may be thicker and heavier than usual, and the several internal projections—as the clinoid processes—may be considerably developed, or various parts of the dura mater may be converted into bone. Indeed, there are no constant changes in the brain proper or its coverings—not even that change in the pituitary body of which

so much has been said by Wenzel; for, writing of it, Rokitsky says that he has "frequently failed to discover it in those who had notoriously suffered from epilepsy and convulsions," and that he has "met with it in others who were thoroughly healthy." It is in the medulla oblongata, indeed, that we alone meet with any appearances after death which can be regarded as constant. In early cases of epilepsy, it is true, we may fail to find anything characteristic even here; but in confirmed cases the medulla oblongata is often harder than natural, from the interstitial deposit of a minutely granular albuminous matter, or else softened, swollen, and presenting evident signs of fatty degeneration. Professor Van der Kolk, who was the first to detect these appearances, has also detected some marked changes in the bloodvessels of the part, and to these changes he directs particular attention. He has examined fifteen epileptics after death, and in them all the posterior half of the medulla oblongata, on making a transverse section, was found to be redder and more hyperæmic than it ought to be; and this was the case whether death happened in an attack or not. On more minute examination, he found the bloodvessels dilated to thrice their natural dimensions, and their walls much thickened. And on comparing the medulla oblongata of several epileptics who bit their tongue, with the medulla oblongata of other epileptics who did not bite their tongue, he found (what is a very curious fact) that the capillaries were especially dilated in the course of the hypoglossus and the corpus olivare in the former case, where the tongue was bitten in the fit, and in the course of the roots of the vagus in the latter case, where the tongue was not bitten in the fit. These discoveries of Professor Von der Kolk are the most recent as well as the most important facts in connection with the post-mortem appearances of epilepsy.—*London Lancet*.

LONDON AND ITS HEALTH.—London, says the Registrar-General, now covers 121 square miles—a square of 11 miles to the side. It is equal to three Londons of 1800. It increases at the rate of 1000 a week, half by births, (their excess over deaths,) and half by immigration, (its excess over emigration.) It is remarkable that in London, one in six of those who leave the world, dies in one of the public institutions—a workhouse, hospital, asylum, or prison. Nearly one in eleven of the deaths is in a workhouse. For the improvement of the health of London three things are to be aimed at—pure air to breathe, pure water to drink, and a healthy soil to live on. The Registrar-General observes that there are above 2000 medical men in London and its vicinity; but they are chiefly employed in treating disease—the art of preventing it is not cultivated; it is not taught in any of our medical schools; it is not formally the subject of examination in our universities. The father of a family does not go to the doctor and say: "How can I preserve my health, and make my children well and vigorous, and develop all their faculties to the fullest extent?" Imagine the 2000 members of the most enlightened profession in the country employed in instructing the people in the way of a healthy life. How many thousands of lives would be saved every year in London! How much better and happier the population would be! A beginning of a movement has been made in the right direction, under Sir B. Hall's Act. Medical health officers are appointed in the various districts of London, and many of them are working courageously against ignorant opposition, with success. They deserve public approbation, for they have done quietly a great deal of good work, and it is probable have saved many lives and prevented much sickness.—*London Times*.

ON THE MEANS TO BE EMPLOYED IN SYNCOPE FROM HÆMORRHAGE AFTER SURGICAL OPERATIONS.—M. Debout, editor of the *Bulletin de Therapeutique*, has published, in a late number of that periodical, a valuable article, wherein he shows, by facts and arguments, that this syncope is not to be treated like the fainting which occurs after parturient hæmorrhage. M. Debout concludes with the following rules:—

1. Syncope following traumatic hæmorrhage is a more serious symptom than the fainting resulting from uterine hæmorrhage, both on account of the nature of the blood lost and its less rapid escape; it may, therefore, be affirmed, that the means found successful in the latter complication are not, as a consequence, likely to be efficient in the former.

2. As syncope, in traumatic hæmorrhage, is the result of want of stimulus to the nervous centres, the remedy will consist in putting the patient upon his back, and in lessening the extent of the circulation by abdominal pressure.

3. As we are to be especially anxious for the energy and duration of our therapeutic interference, we should add to the physical action of the means above alluded to the stimulation of the heated steel knob, rapidly carried over various parts of the cutaneous surface, and assist this operation by enemata of wine. This syncope is so perilous that all the above measures combined will never be too powerful. M. Debout thinks that transfusion of blood in these cases is not to be relied upon.—*London Lancet*.

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SUBCUTANEOUS INJECTIONS OF SULPHATE OF ATROPINE IN TETANUS — RECOVERY.—M. Pescheux has communicated the following case to the Surgical Society of Paris. A woman had met with a scalp wound and a compound fracture of both bones of the leg, in consequence of the falling-in of a chimney. For three weeks she progressed very satisfactorily, when tetanus set in with great violence. After almost every one of the usual remedies had been employed, M. Pescheux subcutaneously injected, along the spinal processes of the cervical vertebrae, a solution of sulphate of atropine in the proportion of one grain of the salt to one hundred of water. About two-thirds of Pravaz's syringe were used, when the patient was seized with the well-known symptoms of belladonna poisoning, which lasted about twelve hours. The tetanic manifestations, when these symptoms abated, were much less severe; and after another injection, made twenty-four hours afterwards, which, however, did not affect the patient so much as the first, she completely recovered.—*lb*.

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OPIUM AND BELLADONNA PLASTERS.—Mr. A. F. Haselden, having observed the inconveniences attending the use of these plasters of the Pharmacopœia, of which most medical practitioners are very sensible, (viz., that the preparation runs beyond the margin of the leather, or frequently penetrates it, and stains unpleasantly the clothing,) proposes, in a recent number of the *Pharmaceutical Journal*, methods of obviating them. He recommends the use of resin plaster instead of gum thus, and morphia in place of opium. For the opium plaster he proposes the following formula, which has been successfully employed:—Lead plaster, six ounces; resin plaster, four ounces; acetate of morphia, one drachm; acetic acid and water, of each four drachms. For belladonna plaster, the following:—Lead plaster, six ounces; resin plaster, four ounces; atropine, two grains; acetic acid, two drachms; water, six drachms.—*lb*.



## Successful Treatment of Whooping Cough by Increasing Doses of Sulphate of Zinc and Extract of Belladonna.

BY DR. H. W. FULLER.

THE author commenced his paper by calling attention to the commonly received opinion, as stated in most books on the subject, that "whooping-cough must run a certain course." He combated this opinion by reference to the results of his own experience, and then proceeded to point out the causes which had led to its general adoption. Amongst these he mentioned the inefficiency of the treatment ordinarily employed, and the neglect of all measures likely to subdue the tendency to spasm, on which the continuance of the whoop depends. Dr. Fuller regarded the complaint as consisting essentially of bronchitic irritation, usually not very severe, accompanied by reflex spasm of the air passages, and expressed his opinion that in most cases the spasmodic symptoms are those which demand most serious attention. Not only is the spasm a most painful symptom, but it is one which may give rise to life-long mischief. His object, therefore, had always been to subdue the spasm as speedily as possible, and the practice which, until the last twelve-month, he had found most successful for the purpose was the administration of sulphate of zinc in rapidly increasing doses.

Dr. Fuller then referred to the discovery he had made as to the tolerance of belladonna by children, which is recorded in a paper published in the last volume of the "Medico-Chirurgical Transactions," and he briefly stated the facts, which are there detailed *in extenso*, as to the amount of belladonna which may be given with safety, and the conditions which should be observed in its administration. The conditions he specified were, that the remedy should be given in divided doses, at least four times daily, and should be administered at first in small doses, which may be increased day by day, or on alternate days by a corresponding amount. He pointed out that mere dilatation of the pupil need not be regarded as a bar to its administration, and stated that if the precautions just referred to are observed, the daily dose of the extract of belladonna may be safely increased up to a scruple or half a drachm without the production of an unpleasant symptom. He then proceeded to state that he had brought these facts to bear on the treatment of whooping-cough, and, from the conjoint use of sulphate of zinc and extract of belladonna in rapidly increasing doses, had obtained results exceeding his expectations. Rarely had he found the whoop to last above twenty-one days, and in some instances it had subsided in ten days. The mode in which Dr. Fuller proceeds is to give the zinc and belladonna as soon as the whoop declares itself. If the attack is accompanied by much febrile excitement and bronchitic irritation, he prescribes a cough drop containing a drachm of antimonial wine and a drachm of ipecacuanha wine to two ounces of water, and, if necessary, applies a blister to the chest. Of the cough drop, a larger or smaller amount is given according to circumstances. In all cases, however, the zinc and belladonna are administered perseveringly. To children under three years of age he usually begins by giving one-sixth of a grain of extract of belladonna and half a grain of sulphate of zinc four times daily, and to children above that age a quarter of a grain of extract of belladonna and a grain of sulphate of zinc. The remedies are given in solution in water, and the dose of each substance is increased by a corresponding dose daily or on alternate days, so that the child who began by taking a quarter of a grain of

the extract and one grain of zinc at a dose, would be taking one grain of the extract and four grains of zinc at a dose either on the fourth, sixth, or eighth day, according to the rapidity with which the dose is increased.—*London Lancet*.

**CONSUMPTION OF ALCOHOL.**—At the recent meeting of the American Pharmaceutical Association, Mr. Frederick Stearns, of Detroit, Michigan, submitted a paper on alcohol, stating that the Ohio River Valley contributed the largest share of whisky and its derivatives produced in the United States. The amount of whisky which finds a market annually in Cincinnati, is about 500,000 barrels, worth on an average, one year with another, \$5,000,000. An estimate of the total product of whisky in the United States, based upon its production in the several States, and not upon the receipts of the large Eastern market, gives 1,500,000 barrels. The total product of alcohol in the United States, is 184,000 barrels, worth over \$7,000,000. Of this quantity one-fourth is manufactured in Cincinnati. The manufacture in that city has, however, fallen off at least one-half since 1858, when it reached its maximum, owing to the foreign demand, which has been nothing since. It is estimated that, until the introduction of illuminating coal oils, by far the largest proportion of the common alcohol produced, was employed in the manufacture of burning fluid; since, however, the largest proportion is employed under the name of pure and proof spirit, in the manufacture of domestic brandy, gin, etc.

In the remarks that followed upon this paper, a statement was made which was corroborated by several members, that in making Catawba brandy, instead of its being distilled from Catawba wine, as is generally supposed, the marc, consisting of seed, skins and pulp, is placed in a still with ordinary whisky, and distilled, and constitutes the Catawba brandy of commerce. Catawba wine is \$1.50 per gallon, and to produce the brandy from it would cost from \$6 to \$8, while it is offered at from \$2.50 to \$4 per gallon—*Phila. Med. and Surg. Rep.*

**LORD BYRON'S FEET.**—The *Lancet* says that models of Lord Byron's feet have been this week deposited in the museum of the Nottingham Naturalist's Society. They are described as about nine inches long narrow, high at the instep, and generally of symmetrical slope. In an accompanying affirmation, it is stated that the deformed foot (the left) was not, as has been generally stated, a "nub" foot, but that it was formed symmetrically as the other, being, however, exactly an inch and a half shorter. The ankle was weak, and the foot turned outwards. To remedy this Lord Byron wore a very thin boot, tightly laced under his stocking; and in early life employed an iron, with a joint at the ankle, passing down the outside of the leg, and fastened to the sole of the shoe. The muscles of the calf were atrophied.

**OIL WITH IODIDE OF AMMONIUM.**—Iodide of ammonium, 15 centigrammes.  
Olive oil . . . . . 30 grammes.  
Against the syphilitic pains.—*Jour. de Chimie Medicale.*

**PILLS OF IODIDE OF AMMONIUM.**—Iodide of ammonium, 1 gramme.  
Mucilage, . . . . . 3 "  
Make twenty pills. Dose—One to three, in syphilis and scrofula.—*Ib.*

## Ascites Originating without any Recognized Cause, and Yielding to the Employment of Tonics.

(Under the care of DR. HANFIELD JONES, St. Mary's Hospital.)

ASCITES unconnected with renal, hepatic or peritoneal disease is certainly not of common occurrence. Dr. Copland notices anæsthetic or passive ascites as one of the idiopathic varieties, but states that it is usually attended with œdema of the ankles, feet, and legs. He recommends, besides other means, opium with diuretics and tonics. The *causa morbi* in the following case may have been scarlatinal poison, but the state of the urinary secretions is unfavorable to that view.

Stephen J. C—, a boy, aged three years and a half, whose parents were not in distressed circumstances, but rather the reverse, was admitted into St. Mary's Hospital on May 9th, 1859. He had been ill three weeks; his abdomen had enlarged gradually without pain or tenderness, and no other sign of disease was noticed previously. His appetite had been bad all the time, and he had emaciated much. Another child had died lately, in two days, with enlarged abdomen. He had been under the care of a practitioner, who had wished to perform paracentesis, to which the mother was afraid to consent. The tongue was clean; bowels relaxed five or six times a day. The heart's sounds were normal, and there was good breathing in both backs. The feet and legs were not swollen. The abdomen was considerably distended, dull, and fluctuating; resonance perceived only in the epigastrium; the upper side in lateral decubitus did not become resonant. The liver did not project below the ribs. To have gray and Dover's powder, two grains of each, three times a day, and also small doses of the iodide and nitrate of potass in carraway-water as frequently.

May 12th.—The urine was examined, and noted as scanty, lateritious, and free from albumen. The powders were changed for mercurial ointment, to be rubbed on the abdomen, and a saline mixture containing acetate of potassa and nitric ether with tincture of digitalis (three minims) were ordered, four times a day.

16th.—Tongue clean; skin cold; pulse weak; bowels relaxed, with green stools, till he had some astringent powders; urine scanty and thick; abdomen distended as before. He is now ordered infusion of digitalis and scopolia with acetate of potassa and nitric ether, and compound tincture of iodide to the abdomen.

On the 18th, as there was no improvement, a trial was made of one-sixth of a grain of tartar emetic thrice a day, and a blister applied to the loins. This was done with the view of relieving renal congestion, which seemed probable, as the diuretics produced no good effect. This also failed, and on the 21st, on account of restlessness at night, he was ordered to have one grain of disulphate of quinine at bedtime, and no other medicine.

23d.—Much more cheerful; appetite better; sleeps very soundly, but perspires then very much. Urine very alkaline, scanty, and thick; deposits phosphates, and contains a large quantity of carbonate of ammonia. The case now began to clear up. To continue the quinine, and five minims of tincture of muriate of iron thrice a day; to which, on the 30th, three minims of tincture of digitalis were added.

During the last fortnight of treatment he had five minims of tincture of muriate of iron and half a grain of disulphate of quinine three times a day. From the time he commenced the tonics his improvement was steady and

rapid. He was discharged, quite well, on July 7th; and fourteen days before, he was reported by his mother to be in much more perfect health than he had been for a long time, even than before his illness; he was much more lively, running about, and eating heartily. The abdomen, also, the mother thought, was smaller than it had been before he was taken ill. The urine under the tonic treatment became more copious and acid, and ceased to effervesce with the nitric acid. It was never found albuminous. On May 26th the left flank was notably duller than the right, owing, no doubt, to distension of the cæcum and ascending colon. On May 30th this was reversed, the left flank having become resonant and the right dull. Position, of course, was excluded as a cause. At the same date, the abdominal distension having diminished but little, the superficial abdominal veins were noted as large.

This case is a good evidence of the advantage of conducting treatment according to rational pathology, and not by mere routine. If diuretics had been persisted in, the case would surely have ended badly. The timely administration of tonics, by giving vigor to the system, enabled the various organs, and amongst them the kidneys, to do their work better, and the result was a good recovery. The tonics were thus indirectly diuretics.—*London Lancet.*

FUNCTIONAL SPASM.—M. Duchenne (de Boulogne,) well known by his indefatigable researches on the subject of nervous disorders, has lately described, under the double name of *functional spasm and functional muscular paralysis*, an affection, which though often noticed in a vague way by most clinical observers, had never been seriously studied by pathologists. The conditions which are implied in the name of this disorder are not permanent, or at all events are not permanently prominent, requiring for their reproduction or manifestation the exercise of some special function, of which they then impede the progress. The commonest form of this affection is that called the “scrivener’s cramp,” and the seat of the spasm or paralysis is in one or more of the fingers, which either curl up, or may become so powerless as to cause the writer to drop his pen—this condition being often observable after a few strokes of this implement, and consequently wholly unconnected with fatigue or nervous sur-excitation. Other muscles besides those of the hand and arm are also found to be liable to this affection—e. g., the sterno-mastoids, the abdominal muscles, and also those of the shoulder. It is, according to M. Duchenne’s observation and experience, generally incurable, and out of thirty-five cases treated by cutaneous Faradization, only two were benefited, and no amelioration whatever was noticed in the remaining thirty-three.—*ib.*

TREATMENT OF CHRONIC MYELITIS.—By Dr. Brown Sequard.—In the beginning of the treatment of chronic myelitis, we usually employ ergot of rye alone internally, and belladonna externally in a plaster applied to the spine, over the painful spot. The dose of ergot, when the powder is used, which is almost always the case, is at first two or three grains twice a day; gradually the dose is increased until it reaches five or six grains twice a day; and in a few cases we have given eight grains twice a day. We do not think it is necessary to make use of the very large doses employed by M. Payan. The belladonna plaster applied to the spine must be a very large one, four inches wide, and six or seven inches long. If there is no amelioration in a few weeks, we give the extract of belladonna internally in doses of a quarter of a grain twice a day.—*ib.*

### The Action of Tea and Alcohol Contrasted.

DR. EDWARD SMITH read a paper on this subject before the British Association for the advancement of science at its late meeting at Oxford. The object which the author had in view was to express in a decided manner the action of these two great classes of substances, in order that their suitability in health and disease might be explained, and data given upon which those may argue who advocate a course opposed to the temperance movement. His observations were based upon his own experiments, which have already appeared in the *Philosophical Transactions* for 1859.

He showed, in reference to tea, that it excites all vital transformations; and whilst it increases the frequency, depth, and chemical changes of respiration, it at the same time increases the action of the skin, as shown by the increase of perspiration. Hence it promotes the transformation of food and tissue, and at the same time cools the body. Fat and acids lessen or prevent this action on the skin, whilst alkalis increase it. From such facts he deduced the conditions of system, season, and climate to which tea is applicable, and showed how far such deductions from science correspond with the actual instructive practice of mankind. He showed that it was not applicable in the absence of food, but only when the system was replete with food. It was not fitted for breakfast, nor for those of spare and active habits, nor to certain exertion, nor for those who perspire too freely, nor for prisoners, nor for the ill-fed and the destitute, nor for the young. It was the most fitted for the old, the corpulent, the sedentary, for some forms of deficient accumulation, for soldiers, for hot climates and seasons, unless at the period when, even in these conditions, the skin is too active, and for all conditions in which there is excess of food in relation either to the necessity for it, or to the power to transform it. It is especially fitted to aid in the transformation of starch and fat foods.

He then showed in what respect the action of coffee differs from that of tea, viz., in lessening the action of the skin, and thereby preventing the waste of heat; lessening the necessity for the transformation of food, by acting upon the kidneys, and sometimes upon the bowels. The conditions under which coffee should be taken are therefore very different from those in which tea is applicable, and in practice we do recognize this difference. Coffee lessens the consumption of food, whilst tea increases it; because the former conserves the heat of the body, and the latter disperses it.

The subject of alcohols was fully discussed, and it was shown that the class ought to be broken up, since the members of it contain very different amounts of alcohol; and beers, if not wines, exert their principal action by the elements apart from the alcohol. The author showed that rum acts differently from brandy and gin, and is a true restorative. He stated that there are no points of similarity between the actions of tea and spirits, and that the latter were useful in conditions quite opposed to those in which tea is required, viz., where it is desired to lessen the action of the skin, and at the same time to sustain the action of the heart. In these respects, spirits exert a powerful influence; but in a normal condition, in health, all the evidences of their action show that they are poisons and not foods.

Beers he thought to be valuable according to the amount of gluten, sugar, acids, and salts which they contain, and hence that the good old-fashioned English ales, made of malt and hops, are of infinitely greater value than the thin bitter trash which has become so fashionable under the name of pale or bitter beer. The action which is of real value is the power which genuine ale has, by its gluten and sugar, to promote the transformation of

food, as shown by the author's experiments; and thereby the interesting fact was made out, that in this important respect tea and good beer have an analogous action, and hence that there is truth on both sides of the temperance question. Ales, however, have a greater affinity to coffee than to tea, since they lessen the action of the skin, and at the same time they increase the action of the heart. They are also fitted to certain exertions in a far higher degree than tea, and indeed in many respects they are suited to different conditions. The author reprobated the introduction of ales into India, believing that, from their power to lessen the action of the skin, the conditions under which they would be useful are very exceptional. If, however, they withdrew the soldier from the temptations of the raw spirit named arrack, they would be of some service — *British Med. Journ.*, July 14, 1860.

### Report of Twenty-four Cases of Tracheotomy performed in the Last Stage of Croup.

In this paper Dr. Fock gives an account of the cases of tracheotomy for croup which have occurred in his practice, and in that of his colleagues, at the Magdeburg Hospital. He observes that, notwithstanding some of the leading practitioners in Germany—such as Langenbeck, Baum, Roser, and Bardleben—resort to the operation, and recommend it in their lectures, it has obtained no general admission into German practice. Of these 24 cases, 10 were successful, the particulars of both these and the unsuccessful cases being exhibited in a tabular form. To this statement Dr. Fock appends some observations.

1. These cases are decidedly in favor of the operation; inasmuch as it was not resorted to until a stage of the disease when death seemed quite inevitable without it, notwithstanding the persevering employment of the various remedies. The saving 10 out of 24 children, apparently absolutely condemned to die, cannot be regarded as other than a great success. It is not desired to draw from these facts the conclusion that the operation should be resorted to in every desperate case of croup, although it is very difficult to indicate in which of such cases it should be abstained from. It would be a mistake to estimate the degree of danger alone from the amount of dyspnoea; for even when this becomes suffocative during the operation, success may yet be the result. As a general rule, it may be stated that the most favorable prognosis may be delivered in those cases which exhibit themselves from the first as pure croup, and are attended by constantly-increasing paroxysms of dyspnoea; while the contrary is the case when there has been a preliminary bronchial catarrh during several days, and when the child, after seeming to be in a state without any peril, suddenly passes into a condition of actual croup. Either on account of the small quantity of air which enters through the contracted larynx, no bronchial rale is produced, or its existence is masked by the laryngeal sounds. The operation is resorted to, and the child in all probability dies with bronchitis and pulmonary oedema. When accompanying the croup, too, a wide-spread bronchitis is observable, the dyspnoea may be more dependant upon the latter than upon the obstruction of the larynx. Pulmonary oedema is probably already present, and death will take place within twenty-four hours after the operation. The difficulty in the performance of auscultation and percussion in these cases is sometimes immense, and may amount to an impossibility. In such instances we can only fall back on the history, and remember that cases of croup in which the

disease has become developed with rapidity and violence are more favorable for the operation than those in which it has for some days been preceded by catarrh. In the latter cases the operation should be declined. Again, the prognosis has always been, within the author's experience, of a favorable character when the depressions below the larynx and at the epigastrium become very marked during inspiration. The exaggerated actions of the inspiratory muscles, especially the accessories, augment such depressions much when the lungs are entirely free, and the obstacle is only placed in the larynx; but the smaller amount of such depression is quite remarkable when there is co-existing pneumonia, extensive bronchitis, or pulmonary œdema. In such cases the probabilities of success are too small to warrant our undertaking an operation. Lastly, the constitution should influence our prognosis. It is decidedly more favorable in thin, long-necked children, than in those of an opposite conformation. In determining whether we shall operate in a given case, we have to ascertain whether the after-treatment, as regards watchfulness, skilful nursing, &c., can be secured—matters which, however easily provided for in a large town, and in a hospital, may not be attainable in a country district; and yet upon them the result may entirely depend.

2. As to the operation itself, the reporter enters into the details and the difficulties of its performance, which we need not repeat. He says he always resorts to chloroform, which renders the operation far more easy of performance; and he has never, even in extreme dyspnoea, found any ill effect to result from its employment. At first the dyspnoea is increased by the inhalation, but the narcosis is speedily established, and then the breathing becomes much calmer than before.—*Brit. and For. Med.-Chir. Rev.*, July, 1860, from *Deutsche Klinik*, 1859.

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A NEW AND POWERFUL SEDATIVE.—The *Boston Med. Journal* quotes the following from the *N. Y. Daily Times*: "The *Journal de Chimie Médicale* contains an account of the discovery of a new and powerful sedative in neuralgia, just discovered by Dr. Field. The substance used is nitrate of cyde and glycile, and is obtained by treating glycerin at a low temperature with sulphuric or nitric acid. One drop mixed with ninety-nine drops of spirits of wine constitutes the first dilution. It has been tried upon animals and patients with remarkable effect. A case of neuralgia, in an old lady, which had resisted every known remedy, was completely cured by this new agent. It has also been tried in dental neuralgia with equal success."

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MEDICAL MEN IN THE NEW ITALIAN PARLIAMENT.—The medical profession is represented in the New Italian Parliament by twelve Medical Deputies, and among them G. Farini, ex-Governor of the Æmilian Provinces. Two of the principal representatives of Italian Medicine, Professor Panizza, of Pavia, and Bufalini, of Florence, have been named Senators. Well merited has this recognition of their public services been: for it has been among the Professors at the Universities that the traditions of Italian liberties were chiefly kept alive during the oppression from which they have now happily become liberated.—*Lancet*.

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## Communications.

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### Abstract from Notes on the Minute Structure of the Spinal Cord.

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BY DR. JOHN B. TRASK.

(Concluded.)

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The maximum capacity of the canal seems to be attained in the region of the dorsal enlargement, and is much diminished in the lumbar portions, but is not so small in the latter as in the upper cervical, between the first and second vertebræ; in this region the diminution in size is most particularly marked.

As to the form of the canal in the normal condition, it is somewhat difficult to determine it with absolute accuracy, for the reasons given on a preceding page, viz.: the difference in density of the membrane of the canal and surrounding parts, the distortion arising from corrugation in the hardening process thus casting some doubt on its true shape during life. There is, however, a uniformity in its appearance under the different reagents used on sections from the same region of different cords, and from the features which it presents to my view under the varied conditions in which I have examined it: it may be considered as having the form of an obtuse ellipsoid in the dorsal region, the major axis of which is transverse to the antero-posterior median line. These remarks apply to a general outline only.

To be more specific, it is necessary to state that the form above given of the opening of the canal has a constant modification of the ellipsoid, as follows: antero-posteriorly are two processes formed by reflections of the tissue of the anterior commissure, the posterior and anterior terminations of which are acute; the anterior portions of these processes are the largest, and extend nearly to the peripheral surface of the cord; in fact, they become one of the long processes produced toward the outer surface of the cord from the anterior cornua, but not as given in Stilling's figure as laid down by Dr. Todd, page 706, Ency. Anat. and Phys., Vol. III. On each side of the antero-median line, and lying between these processes, are two rather broad and shallow sulci; the concave surfaces of which are directed toward the anterior columns of the cord. These sulci destroy the regularity of the ellipsoid form of the canal, thus making it an irregular ellipsoid, from the depressions in one of its sides formed by the sulci, and which are lateral to its minor axis.



The membrane of the canal is easily examined in good sections of the cord. It has all the features of a serous tissue, and lines the entire course of the cavity. I am inclined to the opinion that in the normal state, during life, its inner surface is not smooth, but more or less folded, for, on a careful examination it is found that the rugæ so very distinctly marked on its inner surface correspond to the process-like prolongations of this membrane thrown out from every part of its border exteriorly. These prolongations of the membrane give to the immediate region about the canal the appearance of a zone of rays entirely encompassing the opening. From the manner in which this membrane and its rayed portion transmit light, and its reactions with chemical reagents, I think there is but little doubt that the rays about the canal and the membrane of the latter are homogeneous in structure and office, but, both chemically and structurally different from either the meningeal, arterial, or nerve tissues. Chemical coloring reagents do not affect it in the same manner as other portions of the cord.

As to the question whether this canal is a bloodvessel, (as Dr. Todd has more than once intimated,) I think there cannot be two opinions when the different effects of the same reagent applied to both are so manifest as is found to be the case on the larger meningeal arteries, and as well also on the smaller arteries of the central portions of the cord. The reactions are as clearly different on the tissues of bloodvessels, and the tissues belonging to the membrane of the canal as an ink mark would be on a surface of paper. It therefore seems difficult to bring the imagination up to that point of tension which would couple the two organs as one, when such differences result on the application of a chemical reagent to both.

From the experiments which I have conducted, I cannot but believe that the membrane of the central canal differs from any other tissue of the cord in a structural, and as a consequence, a functional point of view; if it be identical with any tissue of the cord, it is that of the peripheral portions of the columns; in its reactions it comports itself more closely with those than any other. It is so very different in all particulars from the gray matter that it cannot in any manner be associated with it farther than its regional position. A very interesting feature in the immediate vicinity of the central canal, is the great number of bloodvessels distributed in this region, and which at the same time form so beautiful and striking a contrast with that organ. Their number is variable in sections taken from different portions of the cord. I have never seen less than three, and as many as eight arteries surrounding the canal at the different points at which I have examined the same. They appear more numerous in the cervical and superior dorsal region than below the latter point.

In transverse sections these arteries are easily seen; they have in all respects the same appearance of structure as is to be found in sections of the anterior median and lateral vessels of the meninges, and the anterior and posterior arteries which accompany the spinal nerves after their emergence from the cord. These arteries are situated and are most abundant in the substance of the gray commissures, and their distance from the canal is

somewhat variable; it is commonly equaled by about the major or minor diameter of the canal as the vessels may be situated in its antero-posterior region or lateral thereto.

These vessels do not maintain a course parallel to the vertical axis of the canal, for many of them in section present an oblique divergence, and from this fact we are led to believe that the tortuosities observable in the vessels of the membranes of the cord are also maintained in the circulatory system of its internal and central structure. We are not, however, left to inferential deductions alone, in regard to the relation of position of the vessels of the central portion of the cord; in vertical section of the same region the tortuosities inferred from transverse section are seen in greater or less abundance, and the disturbed parallelism of the vessels with the vertical axis is thus proved. It appears to me that the grounds assumed in some quarters that much of the fibrous structure seen in the columns and in the cornua, and commissures, are capillary vessels, must be abandoned, for all the vessels in a section of the cord can be seen, and it certainly is calling strongly on our faith to ask its extension to that point which would thus convert a colorless and (uncolorable) fibre into a hollow tube conveying a colored fluid, the elements of which can be so easily demonstrated if it exists.

#### OF THE CORNUA AND THEIR STRUCTURES.

We have to deal now with structure more delicate and complicated than the parts we have just considered.

If special elementary forms of structure are to be taken as our guide as giving origin to the functions of sensation and motion in the nervous centers, it will become necessary for us to so amend our descriptive methods as shall comport with what we see and know to exist in certain parts of these centers. We are taught in our literature that the functions of sensation and motion are found to lie in the different columns into which the cord has been divided, while at the same time it is known that those columns do not contain an elemental cell giving origin to either of those functions, but on the other hand, that the columns are made up principally of the cellules of the ganglionic or organic system, (which have not until very recently been supposed to possess motor or sensorial function; this supposition, however, is far from a clearly demonstrated fact at present, for it is impossible to tell how far the fibres of the efferent nerves were affected by the inosculation in the ganglia to which the pole of a galvanic pile was applied; it would be most singular, indeed, that motor action should not follow the application of that stimulus when applied to the superior ganglia of the cervical region, considering the functions of those which so freely inosculate with the ganglionic branches,) and it certainly would seem very irrational to endow a column of the cord with function wherein no elemental form belonging to that function is to be found. Therefore, until the corpuscles of the afferent or efferent systems are shown to exist in either of the columns of the cord, the peculiar properties attributed to them by our literature must be abandoned.

There are, probably, valid reasons to be advanced which would make the anterior columns an exception to the above rule; (in this particular I wish to be understood as alluding to the large corpuscles beyond and in front of the anterior cornua,) and I am inclined to the belief that the anterior portions of these columns do possess elemental structures giving origin to motor function, and of which we shall speak more particularly in another part of this paper.

The position of the cornua of the cord are so well understood as to require no description here, but their minute structures are not so clearly demonstrated in all particulars in works of general or special anatomy; the object, therefore, of this part of our subject is to lay down more definitely the position in which the nerve elements are to be found, that they may thus be more easily studied.

The well ascertained fact of the existence of at least three distinct forms of nucleated cells in the spinal cord, and their perfect isolation by well marked and constant boundaries in the higher mammals, has led the physiologist to investigate closely the particular functions that may emanate from the several groups found within those boundaries. The experiments of Sir Charles Bell on the particular functions of the columnar divisions of the cord, has led subsequent investigators to examine more closely into the parts of the columns from which those functions seemed to have their origin, and to demonstrate the particular elements of structure from which the nerves which were endowed with sensorial or motor properties took their rise.

Among recent observers, none have been more successful in elucidating the existence of the primitive cellules than Jacobowitsch and Lenhossek; the former, more particularly, has carried his investigations toward the ultimate where few have the courage and patience to follow him.

In none of the papers of recent investigators do we find the position of the cellules in their regional relations laid down with that minuteness of accuracy which we should expect from them, and which is so essential a requisite whereby others may be enabled to pursue similar investigations, and also to verify their observations; I have thought it not improper, therefore, to detail those positions in which I have met with the different cellules of authors as found in the spinal cord.

According to our latest investigators the three forms of cells vary specifically in form, function, and, it is highly probable, in structure and composition. To the caudate or stellate cells (the largest) is attributed the function of motion. To the fusiform cells (the smallest?) the function of sensation. To the round or oval belong the organic or ganglionic system. (Jacobowitsch.)

*The Anterior Cornua.*—These cornua in the cervical region occupy the middle of the antero-lateral portion of the cord, forming the lines of division which separate the anterior from the posterior columns. Like the commissures and posterior cornua, they are composed of the gray matter. The figures in several works on anatomy approximate their appearance sufficiently

close for recognition. Stilling's figures approach more closely to their correct appearance than any others, and as Dr. Todd remarks, "they are quite true to nature," [enlarged.]

In the anterior cornua are found the caudate or stellate cells. They lie with the *plane* of their major diameter *parallel* with the *horizontal plane of the cord*. In transverse section of the cord, perfectly parallel with this plane, these stellate corpuscles with their nuclei and nucleoli are brought out most superbly; the *nucleus* and *nucleolus* being then easily seen and *central*. In making sections through this plane of the cord, I have found that the slightest obliquity in the sections so much mars the forms of these cells, that often the caudæ cannot be seen, and the nucleus is either not seen at all, or if seen, is indistinct and more or less excentric; when obliquely cut they very often present almost the *fac simile* of a round or oval cell of large size, and would under these conditions be placed to the account of the ganglionic system. Such an error as the latter, however, can not occur, when we remember that the *corpuscles* of the ganglionic system do not enter into any of the cornua.

It is not improbable that obliquity of section to the plane of these cells and of the cord also, has been the cause of some of those discrepant statements with which we often meet, in relation to the structure of the anterior cornua and other parts of the cord. If a section of the cord is made through its transverse diameter, so as to include no more than a *single* layer of cells, or two layers at the most, its correct features will then and then only be seen. I am thus specific in this matter, for it can be accomplished, and anything that goes beyond that thickness is objectionable; I propose no more in this matter than I have done, and which I believe I can at any time demonstrate to those capable of judging of the thickness of the cells.

In the second paragraph under this heading, the chorography of the stellate cells is given in the manner there laid down for the double purpose of separating corpuscles that occur in the *anterior columns*, and not belonging to the ganglionic group; also, to obtain more specifically the position of the cells belonging to the posterior cornua. I would now call attention to those corpuscles of *these columns* and their regional position.

It is necessary to remark here that the caudate cells (of motion) are laid down by *observers* as being *confined* to the *anterior cornua*, and by physiological compilers as either in those *cornua* or in the *anterior columns*, or in the *antero-lateral columns*, as the lucidity of the latter may be more or less developed; accordingly, we are quite sure they are somewhere, but the place they hold is not made the more exact by that form of literature. The latest and really the most competent authorities, (Jacubowitsch and Lenhossek,) the former more particularly, includes all those varied forms of motor corpuscles in the *anterior cornua*, and British observers and writers seem to have followed the same trail over which the German observers have subsequently cut out a plainer road.

In addition to the caudate cells of this portion of the gray substance of the cord, there is to be found in the *anterior columns*, and in *front* of the

anterior cornua, a group of cells in every respect larger and more developed than those of the cornua; they constitute the quadrangular cells of Jacobowitsch, but they are separate in location from the other caudate forms before spoken of, and which that observer groups in a single order, location, and function. So far as regards the order to which they belong, and the functions to which they give origin, no question probably can be raised against them, but against their general location an objection I think will hold. I have found these cells situated, as above stated, *between* the anterior termination of the broad cornua and the meninges of the cord, but in no other situation.

From each of the angles of the square of these corpuscles, four large caudæ are produced, and in a very few of them the prolongations were divided toward the periphery; these corpuscles are all centrally nucleated. Occasionally there is to be seen a corpuscle in this group more or less triangular, which may arise from being cut obliquely; but all the cells of this group have the caudal prolongations much more distinctly marked than any cells found in the anterior cornua.

These cells differ from those of the cornua for the reasons given above, and the following: they are not met with in transverse section; they are situate in the white substance of the anterior columns; they are found only in vertical sections, when the plane of that section is antero-posterior; when the plane of the vertical section is lateral, I have never succeeded in detecting them. Their planes, therefore, are antero-posterior, and their polar axis vertical to the cornual cells, and parallel with the vertical axis of the cord.

From what knowledge we now possess as to the peculiar functions to which the different cellules give origin, there is but little doubt that these corpuscles belong to the efferent system, both from their form and position; but over what particular motor functions they preside, is not so clear from any researches at present made. From the dissimilarity of these corpuscles (in the particulars named) to those of the efferent system, as found in the anterior cornua, it would not seem hazardous to suppose that they may give origin to motor nerves of somewhat special function, as to the nerves of purely involuntary motion.

Taking into consideration the relations of these cells as given above, is there not a probability that they may give origin to the "respiratory system" of Sir Charles Bell, who placed the nerves governing this in the *anterior columns*; and has not his division of the functions of the columns in this particular, more foundation in fact than is awarded to it even by his own countrymen at the present day?

The *general statement*, to the effect that the caudate cellules occur alike in the commissures and the gray matter of the anterior cornua, I thus far have not been able to verify, although I have searched for them most sedulously in the former region. If they have been seen *in situ* by any observer in either of the commissures, I would be glad to know who he is; there are none that I can find who vouch for the fact as stated. It appears to me that this statement has crawled into general use upon a presumption of their presence in this locality in the first instance, based probably upon hypotnet-

ical grounds, on account of those cellules being found in such close proximity in the anterior cornua; probably it now obtains credence by that peculiar process of coacervation which pertains to compilers.

I have carefully sought those cells, in very many instances, in the gray commissure, (where they would be most likely to be found if they exist there;) that is to say, in the gray substance extending between and uniting the cornua on both sides; the boundaries of the commissure I include between the central antero-posterior lines of the anterior cornua. In no instance have these cellules been met with by me 'centric to the bloodvessels which surround the central canal. A few cells having an elongated oval form may at times be seen within the latter points; but to designate them as *caudate cells*, we must leave fact and draw more strongly on the imagination.

To test this question as to the existence of caudate cells in the *commissure*, I took twenty slides of specimens of transverse sections of the cord, all of which were well mounted in balsam, and five sections vertical to the former, made through the region of the commissures, and mounted in the same manner. On the stage of the microscope I obtained the following results from those specimens.

In nine of the transverse sections there was none other than the vesicular matter and the fibres to be seen. In seven others, not more than two of the elongated oval cells presented themselves. In the remaining four slides of this series, more than two, but no more than six of those cells could be demonstrated within the space included. In the slides containing the vertical sections through the region of the commissure, not a trace of one of these cells could be made out. It should be here remarked that the vertical sections have their planes antero-posterior, and that I did not examine vertical sections at right angles to this plane; therefore, the benefit of whatever doubt may arise in this latter case inures to the books. To say the least of the matter, the examination of the twenty-five sections exhibits a paucity of those elongated oval corpuscles, if it does not prove the absence of *caudate cells* entirely.

If the caudate corpuscles do exist in the commissures, it seems most strange that an objective which easily brings out all the other forms of cell, and many of which are far more minute than those, should fail to develop the caudate forms in the commissures, while it so readily resolves them in the cornua of the same specimen. I can conceive of no manner of clearing up this palpable discrepancy, unless it be to *suppose* that the caudate cellules of the commissures (and of which we "read about,") must occupy a different plane than their fellows.

In the long processes thrown out toward the periphery of the cord from the external margins of the anterior cornua, I have not been able as yet to detect other than vesicular matter and fibrillæ. I have examined these processes with much care, and feel satisfied that they are not and do not possess either the properties or structure of bloodvessels, which has been supposed by some to be the case.\* To my view they present analogous features to the

Mr. Snee.

membranes of the caudate cells. The effect of chemical reagents on these processes is very similar but not identical to that of the same reagent on the walls of those corpuscles, but widely different from its effects on the capillary vessels of the cord.

*The Posterior Cornua.*—The posterior cornua, like the anterior, are composed of gray substance; their transverse section exhibits nothing remarkable except, perhaps, a lighter tint on section. Sections made through the horizontal plane develop little else than the vesicular matter, except the gelatinous substance toward the outer and posterior parts of the cord. In these cornua are found a series of cells much more delicate than those of the anterior cornua. The cells of this region of the cord are the fusiform elements to which the function of sensation has been allotted. In his thesis on Experimental Physiology, (*Comte Rendue*, tome 48, March, 1859, page 502,) M. Jacobowitsch states that these cells are very small, "*les plus petites*." This does not accord with my observations in regard to them, for in the cervical region I have met with them *equal* in length, but *not* so broad as the caudate cells of the other cornua, and as to their number in this region of the cord, they come fully up to the latter.

I am unable to account for this discrepancy in any other manner than by supposing that this observer founded his remarks on views of the transverse diameter of these cells, at right angles to their poles; that view would, indeed, present them "*plus petites*." As we are left in the dark entirely as to where he found them so small, it becomes very difficult to verify his statement in this particular.

It is only in vertical sections of the cord that we shall find ourselves able to bring out these corpuscles with anything like distinctness. When thus found they are regular in form, having a centric nucleus and nucleolus, but they *do not* in section, and when *in situ*, present those bifid prolongations which are found attached to them in the improved and borrowed plates. In extremely thin sections, (one seven-hundredth of an inch,) these cells are examined to advantage in their natural positions; we can now discover a colorless fibre projecting from either pole of the cellule, extending in a slightly tortuous line, but vertical to the major axis of the corpuscle. I find it not very difficult to discover bifid cauda attached to the fibrillated prolongations of the cells, when by the use of needles, the compressorium, and other mechanical appliances, and hard work combined, we are thus enabled finally to tease, squeeze, and grind one of these fibres, until by the force thus used these delicate elements are made to assume phases which it seems to me are entirely foreign to their character.

Such a process for delineating these delicate tissues it appears to me would be analagous to an artist painting infantile beauty, while the innocent was writhing under exquisite torture. As Dr. Funke has remarked, and most justly, too, of the delineations in another department of microscopic research, "they have taken on forms of outline so foreign that it would be difficult to imagine what the figures were intended to represent."

The relative position which the vertical axis of these cellules maintain to the surrounding parts is of some importance, both as regards their anatomical position, and also for facilitating our examinations, for if the cord is examined for them through its horizontal plane, those corpuscles will seldom, if ever, be met with in place.

So far as I have examined the cord, the fusiform cells have been found in the posterior cornua *exclusively*, and in no instance have any been seen by me in the *posterior columns* of the organ. I have not been more successful in finding them *lateral* to these cornua, than in the examinations conducted on the posterior columns.

The relations to the planal position of these corpuscles I find to be as follows: their planes are vertical to those of the caudate cells of the anterior cornua, and they thus become parallel to the major axis of the cord, and also with the quadrate corpuscles before spoken of in the anterior columns. I have found these corpuscles most abundant in the region in which the posterior roots take their origin,—that is to say, for a short distance *above* and *below* a line cutting the points of emergence of the *posterior roots*, and parallel with the axial lines of the cornua in a horizontal aspect; they are also present in the interspace above and below the emergence of a superior and inferior pair of afferent nerves, but in an inferior numerical proportion.

Up to the present time I have not been able to detect the afferent corpuscles anterior to a line projected laterally and passing through the middle of the central canal. If they exist anterior to this point, they must have an inclination of plane different from that in which they have thus far been met with.

It remains to be demonstrated how far, if at all, the fibres of the afferent cells inosculate with those of the efferent series, and either or both of these with the elements of the ganglionic system. M. Jacobowitsch has made some advances in this particular, (see P. M. and S. Jour., No. XXXII, page 319,) but as yet not entirely demonstrative on this point. His latest researches tend to show that at the junction of the fibres of the nerve elements, whether peripheral or central, inoscuation ensues with change of function; should this fact be corroborated by future research, the more rational doctrine of decussation and homology of function must fall to the ground.

*The Columns of the Cord.*—The division of the cord into the different columns is founded on natural lines formed by the commissures and cornua, centrally. In the columns we meet with element structure differing from that found in either cornua, and in which the round or oval, (the ganglionic cells,) are located. Like the stellate cellules of the anterior cornua, the corpuscles of the columnar portions of the cord can be seen only in transverse sections. The corpuscles of this system are commonly more largely developed toward the peripheral surface of the cord, and they diminish materially in size as the central portions of the cord are approximated: so much so is this the case, that in close proximity to the cornua, the posterior commissure, and between the lateral processes of the anterior cornua, little else than mere vesicles are to be seen.



There seems room for doubt as to whether the ganglionic corpuscles in the cord are not more limited than would at first sight appear, although no really well defined line of demarcation exists between the finer vesicular forms of cells and those so well defined toward the surface of the cord. The basis of this doubt is founded on the chemical reactions which are found to ensue in treating this organ, which are *constant* features; the coloration is so manifest at these two portions of the columns that we can scarcely believe the structures alike, unless we be allowed the latitude of supposing that very much greater delicacy of the walls exists in the cells distant from the periphery, which would in some measure account for the difference of color observed under those reactions.

A point that militates against difference of structure in the cells of the two regions of the same column, is found in the fact, that under amplification and strong light, the cells which refuse deep coloration appear to me to possess a sameness in structure with the larger and more easily resolved forms toward and adjoining the external surface. It is not impossible that there may be inequality in the thickness of our sections, as between the periphery and central portions, which would in some measure account for this appearance; I have generally found that the central part of the cord did not possess so firm a texture as the circumferential space, after it had been submitted to the hardening process. I must admit such variability in thickness scarcely seems possible, for I can detect no difference in the transparency, and no other difference except the depth of tint.

In many parts of the columns the ganglionic corpuscles present more of the appearance of tessellated epithelium to the eye than anything else to which I can compare them; they may thus be easily recognized from other cells of the nervous center.

These cellules are evidently inclosed in, and possess membranous walls, and are distinctly nucleate; the membrane of the cells presents a well defined outline, clear and distinct, when the *surface plane* of the walls only are brought into focus; their form can then be seen much better than by any other view we can obtain of them; in this focus they present to the eye a semi-opalescent hue, and under two hundred and fifty diameters, an obscurely granulated surface. The nucleus cannot be seen in this focus, *it is below that plane*, but when brought into view, it is found that the membrane of the cell in which it is enclosed is perfectly transparent; when it is in full view, the outline of the corpuscular walls beyond and around it are distinctly seen by a sharp and well defined marginal ring.

The nucleus of the corpuscles are finely delicate; they possess a wall membrane of extreme tenuity, which transmits light much more readily than the walls of the corpuscle when isolated, and with much less coloration; so much so is this the case, that its nucleolus seems more like a minute aperture through which the light passes nearly unobstructed; there is, however, sufficient absorption of the luminous rays to indicate that this, like the nucleus and cell wall, is also membranous.

From the reactions induced in the ray of light on the different structures of these cells, it appears highly probable that the contents of each of its parts are fluid; though that fluid has not been isolated, still the presumption that this is the fact is strong, for it would be difficult to conceive how bodies so transparent, delicate, and membranous, should contain other than a medium of that character; for a substance more consistent than a fluid, it appears to me, would be incompatible with their existence. As the component elements of these corpuscles are still matter of investigation, we will make no further remarks upon the subject for the present.

From such experiments as I have instituted in the investigation of this subject, there seem good reasons for the suggestion of Lister, Turner, and Clarke, that the tissues of the peripheral portions of the columns of the cord, as well also as the neurilemma of the nerves themselves, are both chemically and structurally different. This rule, I believe, will hold good in regard to the ganglionic cells. Thus far I have not been able to impart the colors by Gerlach's process to this order of the nerve elements, while to the afferent and efferent systems there is not the slightest difficulty in tinging every corpuscle in those systems that can be seen in a section. While the elemental cells of the two latter thus become so clearly defined, it becomes interesting to observe that the fibrillæ with which they are surrounded, resist that process.

The above facts to me seem an insuperable objection to similarity of structure in the cells of the ganglionic system with those of the motor and sensorial elements, and should this feature prove constant in the investigations of others, we shall have gained one more step in our progress of elucidating the occult relations of these very complicated and important structures.

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### Fibrous Tumor in the Right Ovary--Exsection--Cure.

BY H. H. TOLAND, M. D.

THE diseases, both functional and organic, of the ovaria, are very numerous. Of the latter, cysts occur more frequently than any other lesion, and are supposed to result from disease and distension of one or more of the Graeffian vesicles. When only one vesicle is implicated, it constitutes the most simple form of ovarian dropsy, and consequently, the one most easily controlled. Ovarian cysts do not, however, always contain a fluid, being sometimes filled with adipose matter, bones, teeth and hair. An encysted tumor of this character which I removed in 1834, contained balls of fatty matter about half an inch in diameter, enveloped with hair from one to two feet in length, also, irregular portions of bone and teeth, surrounded in some of the cysts with a fluid of the consistence and color of honey. Neither bones nor teeth were found in the cysts that contained hair and adipose matter.

Of the organic affections, fibrous tumors occur next in frequency to cysts, and vary in size from a few ounces to forty or fifty pounds — as in the case given by M. Cruveilhier, which weighed forty-six pounds—and did not differ from the fibrous tumors found either in the uterus or any other portion of the body.

• Mrs. W., of Contra Costa county, aged 32 years, and the mother of five children, received an injury in the right hypogastric region, in January, 1860, which was followed by constant and severe pain, accompanied by an enlargement above Poupart's ligament, which, November the 20th, 1860, extended from the superior anterior spinous process of the ilium to the symphysis pubis, and was firmly attached to the surrounding parts. From its location, attachment, consistence, and rapid development, I was satisfied that it not only involved the ovarium, but also, that if permitted to remain until its magnitude was much increased, its removal would be difficult and most probably fatal, if an opinion be formed from the rate of mortality in the cases operated upon both in Europe and America, and particularly in California, notwithstanding the boasted salubrity of the climate, which is so frequently alluded to by some of the city papers when some wonderful surgical achievement is heralded before the result can be determined.

In consequence of the pain resulting from the presence of the tumor, the patient was willing to submit to any treatment to obtain relief, and, on the 24th of October, after the administration of chloroform, an incision four inches long was made about an inch above and in the direction of Poupart's ligament, extending through the abdominal parietes to the external surface of the tumor, which adhered firmly to the surrounding parts anteriorly, inferiorly, and posteriorly. After exposing its external surface, its removal was commenced at the pubic extremity, the fingers of the left hand being interposed between the external iliac vessels with which it was in contact, and the scalpel. Finding upon its inferior surface and near the external extremity a very large and firm connection for a tumor of no greater magnitude, a strong silk ligature was applied, and the attachment divided. But one artery was wounded that required a ligature, and the greatest difficulty experienced in the operation resulted from the escape of the intestines, which occurred upon the slightest contraction of the abdominal muscles, although the wound was so limited in extent.

After the subsidence of the hæmorrhage, which was very inconsiderable, the coagulated blood was carefully removed with a soft sponge, the ligatures were placed in the external extremity of the incision, and the wound closed by six points of the silver suture. The water dressing, secured by a bandage, was then applied, and a half grain morph. sulph. administered. The night was passed comfortably, but at eight o'clock the following morning she had a chill, and at 9 A. M., I found her pulse 90, and she was suffering from nausea and great thirst. Morph. sulph., quarter grain, and sub. mur. hyd., five grains, to be repeated in the evening if not relieved. Bloody serum is discharging freely from the wound, which is encouraged by removing the dressings every two or three hours, and pressing gently upon the abdomen in the direction of the incision.

26th—Pulse 110 in the morning, full and strong; nausea still continues; discharge, unchanged and abundant. Continue sub. mur. and morph. as before directed.

27th—Pulse 90; bowels constipated, and abdomen tympanitic. A purgative enema was administered without affording relief, and two comp. cathartic pills were then given every two hours, until the bowels acted freely. The discharge still abundant, serous, and somewhat flocculent.

28th—Pulse 75, natural; bowels free, with a tendency to diarrhœa. Tinct. opii, gtt. 20, as often as necessary to control excessive intestinal action. Discharge, free and purulent.

From this date she improved rapidly, without any diminution of the purulent secretion, until the ligature was detached on the seventh day, and then it diminished rapidly.

The sutures were removed on the sixteenth day, but not until the external wound was completely cicatrized, and the purulent secretion had disappeared, except at the points occupied by the sutures.

Nov. 18th—Appetite and digestion good; is not confined to bed, and no doubt is entertained of complete restoration to health.

Most of the cases of this character, whether successful or otherwise, that have been reported, are so destitute of minute detail as to render them uninteresting, and consequently, devoid of interest, particularly to those who are denied access to the standard authorities upon surgery.

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## Diseases of Children.

BY A STUDENT.

Continued from last number.

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### CHAP. III.

**Convulsions.**—Till within the last few years, little or nothing was known of the topographical pathology of diseases of the nervous system.

The physiology of the nervous system was a terra incognita twenty-five years ago, and hence, disturbance of its functions were never positively and intelligently referred to the true local cause.

It will still be impossible to speak positively of organic changes in the nervous centers, or in the nerves themselves, until the domains of zoo-chemistry and vitalism shall be more clearly defined. All we know is, that if we see a convulsive or spasmodic movement, it is either caused by an irritant applied locally to a muscle or muscles, or it is the result of disturbed function at the centers of motion, (brain, medulla oblongata, medulla spinalis, etc.,) simply and purely, or that this disturbance of the harmony of motion results from disease of the sensory centers, so that they cannot co-ordinate the motor, or finally, that the afferent or sensitive nerve branches are somewhere impinged upon by something with which they are not usually in contact, or are inflamed or degenerated, or in some way altered so that their function is impaired, altered, or suspended.

Now to determine in what any or all these causative changes consist, is often a task entirely beyond the reach of present medical knowledge. For instance, if a physician sees an infant in convulsions, he cannot say positively whether the cause is some irritative substance in the alimentary passages irritating afferent nerves, thus producing convulsions reflexly, or whether the cause of the affection is primarily in some one of the nervous centers. To make a still plainer case: if the soles of an infant's feet be tickled till convulsions come on, and then a doctor be called, he cannot tell whether the convulsions result from worms, indigestible food, effusion in the serous cavities of the brain, hæmorrhage in some nervous center, or inflammation in the course of some nerve, or from mere debility, or want of nutriment in the brain. He might, in a case of convulsions, ascertain by an eliminative process and questioning of attendants, some negative facts; for example, he

could determine that it was not from dentition, from indigestion, from worms, from eternal irritations, from acute inflammation of the spinal cord, from hydrocephalus, from uræmia, and from many other causes. But when he had eliminated all these, there would remain a vast unknown territory of the nervous system of the condition of which at any given time he must remain totally ignorant.

But must we fold our arms, and look on silently and inactive, because we do not know the seat or the cause of the affection before our eyes? Is it of any avail to know what are not the causes, if we cannot know what are? Undoubtedly. The causes of any given affection are limited, and every one we eliminate diminishes our liability to do injury to our patient by our prescriptions, and in the same ratio, increases the chances of our doing good.

There are two criteria by which every honest physician prescribes: the one is the cause and the symptoms when the cause is known; the other the symptoms alone. In the first instance, he prescribes rationally, if he knows how to choose his remedies; in the next, he prescribes irrationally or empirically, no matter what his knowledge of remedies. To this latter category, nineteen out of twenty physicians, "regularly educated," belong. But this is episodic. This is what I understand by rational practice. If any one, say a child, has been known to eat a large quantity of anything, say raw grapes, and soon afterwards if the child have convulsions, and the physician ascertaining these facts, give an emetic and relieve the stomach, a glyster or a purgative, also, perhaps, to relieve the bowels, this is rational, causative practice. But if he goes into a house and sees a child with one eye open and one shut, his lips working, his pupils dilated, his hands clenched, his limbs trembling, and he prescribes two grains of calomel, more or less, with a sprinkle of Dover's powders, to regulate the secretions, I call this empirical practice. I do not say it is wrong, but simply that it is empirical; because there is no known rational connection by antithesis between the effect of the remedy and the cause of the disease, whatever it may be. Both rational and empirical practice are right in the present state of medical science; but the rational is always preferable when practicable, just as much as certainty is preferable to doubt.

What is convulsion? It is abnormal muscular motion. (Abnormal muscular motion is not necessarily convulsion.) Does it affect the voluntary and involuntary muscles alike, and at the same time? The answer to this question depends upon the location of the cause, that is, upon which nervous center or portion of one, the irritation or injury impinges.

For instance, I can induce an epileptiform convulsion in a male infant, by irritating sufficiently long and severely, the meatus urinarius. In this case, the cause is first local and peripheral, then central, from the undoubted exaltation of the medulla oblongata, and perhaps, of the median lobe of the cerebellum. Hence, anything that should irritate the genitive organs of an infant might, and probably would, cause more or less convulsive movements of the face, eyes, tongue, larynx, muscles of respiration, etc., and this irritation continued would induce more or less serious and persistent impairment of or total abolition of the function of the nervous center, secondarily injured. But should I continue the study of convulsions from such a basis as is here foreshadowed, I should write a volume instead of an essay.

There being at first no intelligence in the infant, there is no conscious control of motion; the babe of two weeks, or even two months, is in a constant normal convulsion. The bilateral movements of the body are very imperfectly performed. The principal function of the brain, in these early days of human life, seems to be to control the motor function, which is constantly excited by external or peripheral stimulants of a thousand kinds. But even this isolated duty it is yet unable to perform; the child does not laugh sym-

metrically; one side of the face laughs and the other not; one eye winks as if at a joke, were it not for the total absence of any conscious expression to the face; one corner of the mouth draws up convulsively when the child is in its most playful moods; and if we observe its tongue, we shall see it frequently twitched to one side of the mouth; the eyes are with difficulty brought to a focus, or kept so; there is frequent strabismus, and even unequal dilatation or contraction of the pupils; the motor function seems to run riot, committing all sorts of exaggerations and oddities, till the function, exhausted by its rapid play, becomes quiet in sleep in a few moments, to awake again to renewed vigor. The bilateral function of respiration, circulation and suction, seems to be tolerably uniform, and under some specific instinctive cerebral control from the very first moments of life, yet even these are by no means perfect.

This vast predominance of the motor functions over the intellectual, this unbridled license of the muscular system, that in adult life is under control of the will, seems to be the most fruitful cause of the great frequency of infantile convulsions. The sensitiveness of the infant to pain, is no doubt as great as that of an adult, and uncontrolled by the will a sensation of pain is always followed by an excited or new motion. In the child this would continue in a cumulative manner until the motions became convulsive. The frequent or long duration of the convulsion is exhaustion not only to the muscles, but to the nervous centers which stimulate them, and to the brain, which is sufficiently developed to suffer, but not to forbid a resistance (convulsion) which exhausts the organism without mitigating the cause. The child becomes unconscious, feels no pain, and by degrees the convulsion vanishes. It awakes, looks about, takes the breast, perhaps smiles, till at length, having reached perfect mental clearness, it again feels pain, (by pain I mean any sense of discomfort,) the motor system resists, increases its uncontrolled resistance, a new convulsion succeeds, and these, if the cause is not removed by nature or art, in a short time destroy the infant. A child cries because it is uncomfortable relatively in its cradle; we take it up and it stops; it has no will to control the motor act of crying, and never stops except from fatigue, or the subsidence of its feeling of discomfort. So with the performance of its excretory functions; they are reflex motor functions, and in the infant are always completed when begun. These same acts can be suspended or postponed in the adult by an effort of volition, which is absent in the infant. If there is any physical obstruction to micturition, such as a calculus in the bladder, or in a ureter, or if the application of a blister has caused stranguary, convulsions may be expected to come on and continue to recur till the cause is removed. If the infant is allowed or compelled to breathe impure air for a long time, the blood will become dark and deficient in nutriment, and the nervous centers, lacking their usual nourishment, will act less harmoniously, and convulsions may result. Mothers have been aroused in the night by peculiar sounds made by the child, and, on striking a light, have seen them livid in the face, and "working" in convulsions. The child sucked itself to sleep on its mother's arm; she drew the bed-clothes over her shoulders (and the child's head at the same time,) and fell asleep; in an hour or two the work was accomplished; impure air, congestion of the brain with dark blood, no nutriment to the nervous centers, convulsions. The treatment in such a case is obvious, though not always ultimately successful. In those short two hours, the brain, bulb of the cord, or cord itself, or some other nervous focus, may have become so altered as to leave a door open for the entrance of death in some other shape at a period more or less remote.

The child should immediately be exposed to fresh air, and its head maintained in an elevated position. There need be no haste to vomit it till the violence of the convulsion has passed off, for during the expulsion of food

from the stomach, merely milk, some portion might, during an inspiration, find its way into the lungs and increase the difficulty of respiration, and thus the convulsion, by leaving more carbonized blood to be impelled upon the nervous centers at the very instant they are needing the stimulus of pure arterial blood. Enemas of soap and water will perhaps never do harm, and in very many cases, will alone afford complete relief. But for this purpose, an ounce or a half pint of the enema is not sufficient; one, two, or three quarts may be required within fifteen minutes. It is unnecessary to say this amount should not be impelled into the intestines at one time, but if any think so, the attempt will convince him of his error, and of the violence of infantile peristaltic action.

This treatment would be utterly without avail, in case the convulsion was from uremic poisoning, except in so far as it should also induce diuresis. But if it be ascertained in a case of convulsions that the infant has not mic-turated freely as usual, it would be well to immediately empty the bladder by means of a number one elastic catheter, while the child's hips (not the whole body) but hips and lower extremities were immersed in hot water, provided the latter were ready for use; but if not, there should be no delay in passing the catheter: the bath and fomentations and mild diuretics would come in with propriety afterwards, to still farther mitigate the convulsion if it persisted, or prevent its recurrence, if it had already subsided. The most rational position in which to place a child in a fit, is partly upright, with the body on one side, inclining more forwards than backwards; neither prone nor supine, but nearer the former than the latter. In such position blood obeying gravity tends to leave the spinal cord and brain, and thus these organs, relieved of congestion, the less tardily resume their functions.

Convulsions often occur after scarlatina or measles, any exhaustive affection by which the nervous centers are debilitated. These may sometimes be removed and the child permanently relieved by the vegetable alkaloids, brucine strychnine, caffeine, piperin, quinine, and perhaps some others.

I saw a case Jan. 10th, 1858, in convulsions without much discoloration of the skin, in a child aged six years, pale and anæmic, but convalescent from scarlatina for the last eight days. From the feeble condition of the heart and general circulation and history of the case, I perceived the cause to be debility of nervous centers from lack of their peculiar nutriment. Taking my hint from *Lehman* I ordered cloths steeped in a strong solution of quinine to be applied to the whole abdomen, and the following recipe to be given during the remissions, which occurred every few moments: sulph. quin. dr., j; acid sulph. gtt., qv; aquæ dest. oz., iv; a teaspoonful to be given every hour. I gave the first and third myself. It was faithfully administered, and occasionally a little beef juice and brandy. I saw the child at 10 P. M., the second time; it was still in convulsions, as it had been for the last six hours; though these were not very violent, the child was unconscious, except the partial returns of intelligence that occurred during the slight remissions. The following day at 10 A. M., instead of being dead as I expected to find him, he was free from convulsions, entirely rational, and his hearing did not seem the least impaired, although he had taken at least thirty grains of quinine by the mouth, besides what might have entered the system by endosmose from the local application. I ordered a grain of quinine every sixth hour, to be continued for three days: diet, beef juice, rice and white sugar. The child rapidly recovered: no other prescription was made; and now he is well and his mind not the least impaired. Evidently here was no organic lesion of the cerebro spinal axis, no effusion, no softening, no atrophy, no induration, no tubercle, but mere defect of nervous nutrition.

*Case.*—A child, a little less than two years old, was seen by me in convulsions, which had come on without any cause apparent to friends, when it was

about ten days convalescent from, they said, measles. It had been in convulsions without much intermission 24 hours. I enquired about the urine: they knew nothing of it, except that it was scanty and "dark colored." I introduced a No. 1 gum catheter, and drew off about half an ounce of urine which was brownish and opaque with flocculi. I pressed over the renal region, and the infant writhed as if in agony. The pupils were semi-dilated and motionless; the eyes up-turned; the head hot; there was persistent trismus, and slightly remitting tonic convulsions; face pale; eyes transparent. I did nothing, but said the child would probably die in less than 12 hours; it died three hours after my first and only visit. This was undoubtedly a case of uræmic convulsions, attended with disorganization of the kidneys; though no autopsy could be made in verification. At the stage in which I saw the case, to have attempted even palliative aid, would have been quackery. Uræmic convulsions, with organic disease of the kidneys are irremediable. The convulsions that occur in infants in the last stages of pneumonia are fatal symptoms: they show that the power of death is already victorious over the rapidly cooling tide of life, that the nerve centers no longer possess the vital force to send their mandates along the nervous lines; the intelligent looking, pale transfigured face, the wide staring eyes, and almost motionless pupils, and next the trismus, then the tonic spasm and clenched thumbs, then death, are so many rapidly succeeding, or simultaneous phenomena, over which our art has no control.

The same trismus, *clonic* spasm, clenched thumbs, but livid, or purple, instead of pale look, with heavy comatose eyes, sometimes suffused looking eyes will occur in an infant, from an overloaded stomach, and will disappear by the free use of injections and then diffusive stimulants.

There is the convulsion which ushers in the coma resulting from effusion in the cerebral ventricles. This subsides, reappears, and is followed, by from two to fifteen days, of a semi-comatose sleep, which always terminates fatally; these cases are *never* saved.

We see a child with head symptoms, occiput bare of hair from rolling on the pillow, head hot, pupils small in shadow, or dilated in strong light, or oscillating, eyelids nearly closed, sleep with eyelids partly open, child roused with difficulty, only to relapse into his sweet sleep, pulse frequent at first, then slow but full, after a few days smaller and slower, then smaller and more rapid and still less vigorous, perspiration sticky. These patients *all* die: *none* were ever saved. This cerebral fever, and the convulsions which often usher it in and terminate it, have no opponents in medicine, or surgery. They may be prevented, never cured, or even palliated, hence, it is idle to speak of treatment. No physician has the impudence to pretend he can cure these cases, or postpone the result. Between me and my readers, all, privately I say it, he can hasten the result and often does.

There is another variety of convulsions that is always fatal, or at least entirely beyond the control of known remedial agents; this is the trismus, or lockjaw of the new-born infant. Of its cause we are not certain. There is always more or less congestion of the spinal cord and its membranes, and often extravasation of blood, or serum, external to the theca and into the arachnoid cavity. Apoplexy of the spinal cord and medulla oblongata may be considered the immediate and incurable cause: leeches might rationally be applied along the spine and under the occiput, but with the most limited hope of result. The disease cannot be mistaken: it occurs in the first days of life; not later than the first week, generally in the first 24 hours. It is known by the gradual fixing of the jaws, rigidity of the limbs, bending of the body backwards in the opisthotonos condition, clenching of the little fist, with the thumb in the palm, wide separation of the big toe from the other toes,



purplish, or deep livid look of the whole body, symptoms increasing in violence, with occasional partial remissions, till death closes the agony of the little sufferer within from 20 to 40 hours. As remarked above, there is no remedy for this infantile convulsion.

I saw a child that was born Saturday, 8 P. M., apparently well. The parents were wealthy; the child and all its surroundings cleanly, rooms well ventilated. At 10 A. M., Sunday morning, the nurse said it screeched a little, and its body seemed getting stiff and blue; she tried to warm it, but it got worse; she gave it catnip tea; but it could scarcely swallow. They became alarmed. It was their first and only child: a son. I saw it at 1 P. M. It was in the condition of opisthotonos, the tetanic convulsion was firm. I tried injections, ammonia, leeches under the occiput; no mitigation. I folded my arms and looked on. The child died at 5 P. M., in tetanic convulsion; no autopsy. In another case I would fold my arms at the beginning.

*Recapitulation.*—1. Convulsions are abnormal muscular movements.

2. They are symptomatic of either functional or organic lesion of one or more nervous centers.

3. When the affection of the nervous centers is merely functional from some remote or peripheral source of irritation, such as indigestible food, constipated bowels, retained urine, (if not too long retained,) distended, or irritated gums from teething, mechanical pressure on some remote part, etc., they are curable by medicinal or surgical means.

4. Convulsions resulting from systemic exhaustion, or from anemia following eruptive diseases, are sometimes curable by some of the vegetable alkaloids and concentrated nutrition, such as beef juice, glucose, etc.

5. Convulsions which occur towards the period for the termination of organic diseases, as of the lungs, bowels, kidneys, etc., are symptomatic of death, and not one case in ten thousand recover. Remedies in these cases are of no avail; it is too late.

6. Trismus of new-born children is incurable by any means yet known: if we are acquainted with its pathology, we are not the more enlightened as to the remedy.

7. Convulsions from spina bifida will end in death sooner or later, except in perhaps one case in a million, in which it is barely possible for the tumor to subside and the convulsions which it may have occasioned to return no more. The treatment is puncture of the tumor so as to draw off a portion of the effused fluid daily, or oftener. These cases are hopeless.

8. Tonic convulsions affecting the whole body are always symptomatic of organic lesion of some nervous center, or centers, and always end in death. Remedies are useless.

9. Clonic convulsions are frequently symptomatic of merely functional disturbance, and are curable (*in limine*.)

10. It may be said generally, that all organic lesions of the cerebro spinal axis in children are absolutely incurable, and consequently, the convulsions they originate.

11. I believe that an experienced observer can distinguish a curable from incurable case of convulsions, nine times in ten, without touching the infant, and without asking a question, by the mere pathological aspect of the child.

## Enlargement of the Anterior Saphena and Superficial Veins of the Leg.

BY H. H. TOLAND, M. D.

J. P., aged 28 years, had suffered from varicose ulceration of the lower extremities for fifteen years, produced by an enormous distension both of the anterior saphena and veins of the legs; recently they acquired such magnitude that he was rendered unable to attend to any business, and consequently, determined to be relieved from both the pain and inconvenience inseparable from the disease.

The saphena on the left side, besides being at least an inch in diameter, was elongated and tortuous, except at a point about two inches below Poupert's ligament, which was the place selected as that most suitable and safe for the operation which I prefer, and was described in a previous number of this Journal. On the 31st of October, 1860, after the administration of chloroform, an incision was made in the direction of the vein, which, when exposed, was raised upon a director, and a needle armed with a strong silk ligature passed under the vessel and tied. After the insertion of six pins below the ligature, as recommended by Velpeau, the vein was divided about half an inch above the ligature, and the hæmorrhage controlled from the free and superior extremity with a compress, secured by a bandage applied from the foot, embracing the entire leg and thigh. No pain was experienced in the vein above the ligature, and above the wound there was neither redness nor swelling at any time during the progress of the treatment, but on the second day, from the wound to the knee the skin was red, produced apparently by congestion of the capillaries, as it required an unusual length of time for it to return after being removed by pressure.

On the morning of the third day, although there was but little constitutional disturbance, the whole anterior portion of the thigh was red, painful, and swollen, being particularly firm and sensitive to the touch in the direction of the vein. The tincture of iodine was substituted for the water dressing that had previously been applied, without any improvement either in the appearance or condition of the extremity. The vein became daily more painful and distended until the 7th, when I determined to remove the contents by puncturing the most prominent points with a lancet. Blood mixed with pus, escaped freely, and continued to discharge until the vein was entirely obliterated.

Nov. 18th—The wound made to expose the vessel, as well as that to allow the escape of its contents below the ligature, have healed, and the patient is able to take exercise without inconvenience. The pins by which the veins below the knee were secured, produced the desired effect, although but little local irritation resulted from their presence. They were all removed on the seventh day, which was found sufficiently long to obliterate the vessel without leaving a troublesome ulcer.

If it had not been for the precaution taken in this case, and which I recommended on a previous occasion, this operation would certainly have proved fatal, as phlebitis was rapidly developed, and progressed to suppuration in a few days, and if the communication with the internal veins had not been destroyed, it must have extended to them and proved disastrous. The veins above the ligature healed as readily as these vessels usually do, after the simple operation of phlebotomy.

After witnessing the result of this operation upon diseased veins, I can readily comprehend the cause of the great repugnance many of the older surgeons exhibited to all operations proposed for the cure of every variety of this troublesome difficulty, since every conscientious surgeon necessarily shrinks from any course of treatment only calculated to remove an inconvenience by which life may be endangered, and feels that it is better that many should suffer the annoyance of palliative remedies rather than even one useful life should be destroyed by recklessness, or an unwarrantable thirst for notoriety.

The result of this case has also convinced me of the great safety of this operation when compared even with that approved of and practiced by Velpeau. If the vein had not been divided above the ligature, it would have been impossible to have arrested the progress of the inflammation before it reached and obliterated the large internal venous trunks, which must, necessarily, always prove fatal; the presence of pus in the interior of a vein, being all that is necessary to produce that result.

Previous to the adoption of this method I seldom interfered with the veins; but since, it has been frequently practiced without having witnessed the occurrence of any alarming symptoms in previous cases during their treatment, I now appreciate its advantages much more highly than formerly, and feel perfectly secure from the danger of phlebitis, which may occur in any case when any other method previously recommended has been adopted.

If I again meet with a case in which the vein is so much distended, after applying the ligature and pins, and dividing the vein so as to cut off all communication with the heart, I will puncture the enlarged vein between each pin or suture, so as to allow the blood to escape, and thereby facilitate and secure the obliteration of the vessel, and effectually prevent the possibility of the occurrence of such a complication.

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## Editor's Table.

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**HEALTH OF SAN FRANCISCO.**—The current month has been free from epidemics of all descriptions. There have been three or four sudden deaths, the causes of which remain unknown from want of autopsies. There have been a good many cases of ulcerative tonsilitis, and a few of genuine diphtheria of mild form, none fatal. The writer of this note has an excavated ulcer on left tonsil, half an inch long, the first affection of the tonsils in his life. It is altogether probable that by the aid of quinine, piperin, and brown stout, this affection, with the severe constitutional symptoms, will disappear in a few days.

There have been a little more than the usual number of fatal and severe casualties. We have not had more than three days of rain in the month ending 29th Nov., the remaining days have been delightful, sunny, and without wind: this comparative stillness of the air, with sunshine and moist earth, has doubtless developed miasm, to which the many acute affections that have occurred during the past two months may doubtless be attributed. The number of deaths in this city, from all causes during the past two months, is 295.

OVARIOTOMY was performed in this city, in which an *original* and *striking* method of disposing of the intestines was practiced. The intestines were laid out on the table on each side of the patient during the removal of the tumor. The incision was conveniently ample, extending from sternum to pubis, save perhaps an inch or two at each end of cut. Is it astonishing that American surgeons are called "hutchers" when such diabolical modes of operating are practiced in open day? There could be but one result to an operation of such magnitude, so recklessly and unskillfully and unscientifically performed. Notwithstanding brandy, ammonia, et id, &c., and electricity—the unfortunate victim to this outrage, under the mantle of surgery, died in a few moments.

ON the 26th, a fireman fell from the awning of a house on fire, striking upon the pavement. At the autopsy four of the vertebræ were found crushed. He lived twenty-three hours after the fall, in perfect consciousness. (Attending physicians' statement.)

THE fourth case of pink urates, mentioned on page 408 of the October number of this Journal, died on the 26th inst. No autopsy could be obtained. This is extremely unfortunate, for at present our treatment of these cases is empirical, and necessarily, for want of exact knowledge concerning the pathological condition of the organs affected.

A CASE of sudden death occurred in this city a few days ago. A tumor in the groin on Friday evening from fatigue in walking. Tumor, reddish and purplish, and painful; on Saturday a poultice was applied. On Sunday, man taken with vomiting, pulse sank rapidly, and the case terminated in death at 8 P. M. Diagnosis given in the daily prints, malignant erysipelas!! No autopsy, as usual.

LIGATION OF THE ARTERIA INNOMINATA.—California is not behind any portion of the world in the art of crime. She is equal to other portions of the world in arts and science and experiments, *quoad* the ability. She merely lacks the development.

The arteria innominata has been tied in this city and the case is dead, and the autopsy has been made. Result: he died from the effects of the operation. Any surgeon who ties the innominata is either insane, a knave, or ignorant of hydrodynamics. This operation is *necessarily* fatal, as any physicist can demonstrate, without recourse to physiology. The ligation external to the tumor is rational, and should be sometimes successful.

OBITUARY.—G. W. Proctor M.D., of Sacramento, formerly of Kentucky, aged 34, died on the 16th of November, of phthisis pulmonalis.

Dr. Proctor graduated at Louisville Ky., 1848.

He was for sometime aware of the hopeless state of his lungs, and we well recollect his coolness and almost indifference when, some months since, after auscultating his chest, we told him that nearly two-thirds of their normal capacity was lacking. He continued to employ hygienic means and supposed remedies, but without any hope, except of postponing for a few days the inevitable result.

From the few moments we had the pleasure of his conversation, at the first and only time we ever met him, we could not but remark the clearness and cultivation of his mind, and were filled with sadness that a gentleman of so much promise, must so soon be lost to the profession and to society. Let his rest be perpetual.

DIED in Charleston, S. C., on the 13th August, 1860, John Bellinger M.D., aged 55.

DIED at Brighton, England, June 29th, 1860, Dr. Addison, aged 67.

DIED at Fort Moultrie, Sept., 1860, Surgeon Bernard M. Byrne, U. S. A., at about the age of 60.

DR. Denton, Prof. of Theory and Practice, in the University of Mich., died at Ann Arbor, Mich., on the 17th of August last.

DR. Lizars died 20th May, aged about 75. The obituary notices we have seen do not mention the date of his birth.

HEREDITARY MEDICINE.—On the 28th of April 1860, in a magnificent private residence, in Cumartin street, Paris, suddenly died, at a most happy and serene old age, the last representative of a family, of whom the founder was one of the glories of French Surgery, and which family during a period of 300 years, has seen eight of its members belonging to the medical profession, from father to son in regular and uninterrupted succession. This family had the ancestral name of Guillemau. The last of this illustrious line of medical princes is dead. Jean Francois Guillemau was born March 18th, 1772, and died as above stated, April 28th, 1860, having reached the patriarchal age of 88.

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“E. J. FOUNTAIN, A.M., M.D.,” of Davenport, O., (Am. Med. Monthly) thinks chlorate of potash will cure or arrest phthisis pulmonalis. We don't.

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BOOKS RECEIVED.—O'Reilly on the Placenta and Nervous System; The Dental Register of the West; Transactions of the Medical Society of the State of Pennsylvania; Involuntary Confessions.

THE  
Pacific Medical and Surgical Journal.

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Selections.

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On the Theory and Therapeutics of Convulsive Diseases.

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BY CHARLES BLAND RADCLIFFE, M.D.,  
Fellow of the Royal College of Physicians, London.

[Continued from last number.]

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WHAT, then, is the theoretical purport of the foregoing facts? To which view of muscular motion does it point? And first—for herein may be found the key to the whole matter—what is the theory of simple epilepsy to be deduced from the facts which concern the circulation and respiration of the epileptic?

1. No very certain conclusion is to be drawn from a consideration of the state of the circulation and respiration in the interparoxysmal period, except this—that plethora in the form so often exemplified in the butcher is never met with, and that feverish activity, even as an accident, is of rare occurrence. There are, indeed, cases of *epileptiform* disease, in which the circulation may exhibit at times some signs of activity; but these cases, as we shall see in the next lecture, present no objection to the conclusion which is forced upon us by the facts—that the pulse is rarely otherwise than weak and slow in the interparoxysmal period of simple epilepsy.

In the fit itself, the facts, when fairly read, admit of one conclusion, and one only. At the instant of the fall, a corpse-like pallor overspreads the countenance and the pulse dies out at the wrist—phenomena which seem to be only intelligible on the supposition that the arteries are nearly empty of red blood. A moment or two later, and the black and bloated face, the choking sounds, and the absolute suspension of all respiratory movements, show very plainly that the formation of red blood is arrested for the time.

During the whole course of the convulsion, indeed, the state is one of suffocation. During the convulsion, that is to say, the supply of arterial blood is cut off at the fountain-head.

There is, however, one fact which, at first glance, might seem to show that there is an increased injection of arterial blood during the convulsion. Such injection is manifestly very imperfect at the onset of the fit, for upon no other supposition can we explain the corpse-like paleness of the countenance and the feeble and imperceptible pulse. But if the finger be kept upon the wrist during the convulsion, it will be found that the pulse will go on rising until it has acquired a force and fulness which it never had in the interparoxysmal period; and if the hand be placed on the breast, it will be found also that this rising of the pulse is accompanied by increased action of the heart. These facts are evident and unmistakable, but they do not show, as without reflection they might seem to do, and as they are often supposed to do, that *red blood* is being injected in greater quantity into the arteries during the convulsion.

When the process of respiration is arrested, the right side of the heart and the venous system generally are soon gorged and distended with black blood. Under these circumstances, indeed, the gorged and distended state of the right side of the heart may reach a point in which the folds of the tricuspid valve are forced widely apart, and an opening left through which the beatings of the ventricle are made to tell almost as much in driving the blood back through the auricle into the veins, as in sending it onward through the pulmonary artery into the lungs. But it is not right to suppose that the left side of the heart and the arterial trunks are empty of blood; and this may be readily verified by watching the changes which take place in the carotid and jugulars of a rabbit during the process of suffocation. On exposing the vessels, the artery is seen to be filled with red and the veins with black blood. On suffocating the animal by tying a ligature around its windpipe, the color of the blood in the artery darkens rapidly, and in about two minutes and a half it is every whit as black as that of the blood moving in the neighboring vein. Nor is the vein gorged and distended and the artery comparatively empty. On the contrary, the artery is felt to pulsate as strongly under the rush of black blood as it did previously under the rush of red blood. Nay, *the pulse of the black blood is actually stronger than the pulse of the red blood*; for, on testing with the hæmadynometer, the late Professor John Reid (who first directed attention to these facts, and who has investigated the condition of the circulation in asphyxia more carefully than any other observer) found the mercury highest at the moment when the blood in the artery had become thoroughly venous and black.

A full pulse and a throbbing heart, therefore, must be looked upon as natural accompaniments of asphyxia; and thus the full pulse and the throbbing heart of the epileptic paroxysm, instead of showing that a larger quantity of *red blood* is being injected into the arteries at the time, may show that these vessels are then laboring under a load of *black blood* as they do in asphyxia. And that the full pulse and the throbbing heart of the epileptic paroxysm must have this latter significance is evident, for the livid black, and bloated head and neck, and the complete suspension of all respiratory changes, show very clearly that black and not red blood is coursing through the vessels at this time.

When the convulsion is over there is little to notice in the state of the circulation and respiration. When the spasms cease, the respiration is speedily re-established, and the re-admission of arterial blood into the system may be attended with some transient and inconsiderable febrile reaction; but this reaction has nothing to do with the convulsion, for when reaction is present convulsion is absent, and if convulsion returns, it is not until every trace of reaction has first taken its departure.

Regarding, therefore, these facts—the corpse-like paleness and the comparative pulselessness at the onset of the paroxysm, and the signs of positive and unequivocal suffocation by which this stage of paleness and pulselessness is succeeded—and remembering the previous arguments, which show that the convulsion *must* be ascribed to the presence of the stimulus of venous blood, there appears to be only one conclusion, and this is, that the convulsion of epilepsy is connected with the want of a due supply of arterial blood in the vessels.

Nor is it an objection to this view that the convulsions cease when the blood has become thoroughly deprived of its arterial properties. In order to discharge their office of conductors, it is certain that the nerves must be supplied with a sufficient quantity of arterial blood. If, for example, the principal vessel of a limb be tied, the nerves of that limb, wanting their due supply of blood, are unable to carry messages to the mind, or to transmit mandates from the mind to the muscles, until the collateral circulation is sufficiently established; and hence it is a fair inference that there must be a point in the process of suffocation where, wanting a due supply of arterial blood, the nerves must cease to be conductors, and where, consequently, the convulsions will come to an end; for, upon any hypothesis, the convulsions will come to an end when the nervous centers cease to be in a proper connexion with the muscles.

But, it may be asked, is there no change in the blood itself? Is there not some important truth in the “humoral theory of epilepsy,” as recently advanced in this place by the late lamented Dr. Todd? “I hold,” said this distinguished physician, “that the peculiar features of an epileptic seizure are due to the gradual accumulation of a morbid material in the blood, until it reaches such an amount that it operates upon the brain, in, as it were, an explosive manner; in other words, the influence of this morbid matter, when in sufficient quantity, excites a highly polarized state of the brain, or of certain parts of it, and these discharge their nervous power upon certain other parts of the cerebro-spinal center, in such a way as to give rise to the phenomena of a fit. A very analogous effect is that which results from the administration of strychnia, which is best seen in a cold-blooded animal, like the frog. You may administer the drug in very minute quantities for some time without producing any sensible effect; but when the poison has accumulated in the system up to a certain point, then the smallest increase of dose will immediately give rise to the peculiar convulsive phenomena. This is the humoral theory of epilepsy. It assumes that the essential derangement of health consists in the generation of a morbid matter, which infects the blood; and it supposes that this morbid matter has a special affinity for the spinal cord. The source of this morbid matter is probably in the nervous system, it may be in the brain itself. It may owe its origin to a disturbed nutrition—an imperfect secondary assimilation of that organ—and in its turn will create additional disturbance in the functions and nutrition of the brain.” And again: “According to the humoral theory, the variety in the nature and severity of the fits depends on the quantity of the poisonous or morbid material, and on the part of the brain which it chiefly or primarily affects. If it affect primarily the hemisphere, and spend itself, as it were, on them alone, you have only the epileptic vertigo. If it effect primarily the region of the quadrigeminal bodies, or if the affection of the hemispheres extend to that region, then you have the epileptic fit fully developed.”

This theory is based upon the well-known connexion between the presence of urea in the blood, or carbonate of ammonia resulting from the decomposition of urea—the result of defective renal action—and one form of epileptiform convulsion; and it might also have been based upon the connexion between convulsion and blood overloaded with bile. But if there is any evidence in these facts in favor of the existence of this hypothetical morbid ma-



terial, there is none in favor of the idea that the *modus operandi* of the material is in exciting a highly polarized state of the brain, if by this state is meant anything like a condition of excitement. On the contrary, it is certain (as will be shown in the next lecture) that the action of the brain and of the nervous system generally is reduced to the very lowest ebb at the time when convulsion is brought about by the accumulation of urea and bile in the blood; and it is not less certain that strychnia, instead of acting as Dr. Todd supposes it to act—that is, by exciting a highly polarized state of certain parts of the nervous centers, acts by reducing the stimulating powers of the blood and by diminishing the electrical action of both nerve and muscle.

There is little doubt, however, that retained excretions must play an important part in the production of epilepsy. A free discharge in the office of excretion, not only in the kidneys and liver, but in every excretory organ, is essential to the preservation of healthy blood; and it may well be believed that an imperfect discharge of the office of excretion, in one or other of the *excretory organs*, may lead to the accumulation of effete matter in the blood, and that this accumulation of effete matter may be a not unimportant cause in bringing about an attack of epilepsy. But there is no reason for supposing that the blood under these circumstances becomes more stimulating. On the contrary, the conclusion which arises out of the history of the cases where the urine or bile is suppressed, is the natural conclusion, and this is, that blood thus altered is less fit to discharge its several offices; in other words, less stimulating.

Nor does there appear to be any reason for supposing that venous congestion has a more important part to play in the production of epilepsy than that which has been assigned to arterial injection. No doubt the veins of the brain and head generally are congested from a very early moment, but there is a moment antecedent to this in which the death-like pallor of the face is a sufficient proof that the veins were emptier than usual before they became congested. At any rate, the acknowledged anatomical difficulty must be overcome before it can be supposed that Dr. Marshall Hall's hypothesis of *trachelismus*—or the prevention of the return of blood from the brain by the spasm of certain muscles in the neck—has anything to do with the causation of epilepsy.

It would seem, then, as if there was something utterly uncongenial between epilepsy and arterial excitement. It would seem, indeed, as if the spasms, as well as the loss of consciousness and sensibility, were connected with want of arterial blood—empty vessels in the first instance, vessels filled with black blood afterwards. It is not improbable, also, that the blood may have been previously rendered less stimulating by the retention of something which ought to have been eliminated by one or other of the organs of excretion. In a word, the phenomena are entirely in harmony with the previous considerations respecting muscular motion; for according to them, the action of arterial blood is to antagonize contraction, and not to cause it.

2. Interrogating the nervous system, the facts are found to have that theoretical significance which the state of the circulation and respiration would lead us to expect.

These facts will scarcely warrant the idea that epilepsy is connected with anything approaching to over-action of the *brain proper*. On the contrary, everything seems to point to a state which is the very opposite of over-activity. Thus, the comparative want of memory, intelligence, fancy, and purpose, which marks the interparoxysmal condition; the utter annihilation of everything mental in the fit itself; and the gloom and prostration following the fit, are facts which can have no double meaning.

Nor is a contrary opinion to be drawn from the morbid appearances which are disclosed after death. If these chance to indicate previous inflammation, it does not follow that convulsion had any direct connexion with the inflam-

mation as inflammation; on the contrary, the convulsion may have happened before or after the inflammation, when the energies of the brain were prostrate or exhausted—an alternative which we shall see to be the correct one when we come to speak of epileptiform disease connected with special disease of the brain. And surely it is not possible to draw any but one conclusion from the appearances which are common to epilepsy and dementia—pallor of the gray substance, atrophy, chronic softening and induration, dropsical effusion and the rest?

But what of the state of the *medulla oblongata*? for, as Professor Schröder Van der Kolk has well shown, the seat of the characteristic spasms, the bilateral character of the spasms, and the appearances presented after death, all point to this organ as one which is specially concerned in bringing about the epileptic paroxysm.

The spasms of epilepsy begin in muscles which receive nerves from the *medulla oblongata*—in muscles, that is to say, which are supplied by the facial, the accessory, the hypoglossal, and the *portio minor trigemini*; in slighter cases they are limited to these muscles. The spasms of the walls of the chest and abdomen, which are the most prominent and marked features in the complete attack of epilepsy, and which may be so fierce and unyielding as to cause fatal suffocation, also point to the same nervous center; for a similar state of things is brought about by the action of a strong stimulus upon the great afferent nerve of this center—the pneumogastric.

The bilateral character of the spasms is another argument that the *medulla oblongata* is especially affected in epilepsy. The lateral halves of this organ are connected in the most intimate manner by transverse fibres and commissures—much more intimately than the lateral halves of the brain and spinal cord; and hence it is that the corresponding nerves belonging to the two sides of the *medulla oblongata* are under a stronger physical necessity to act together than that which rules the corresponding nerves belonging to the two sides of the brain and spinal cord. In the case of the two latter centers, the nerves belonging to one side may be paralysed or otherwise affected without any obvious injury to the nerves of the other side; but not so in the case of the latter center. Indeed, it is evident that the actions which emanate from the latter center—the play of the features, the motion of the tongue, the vocal adjustments of the larynx, the respiratory movements, &c.—must at once come to an end unless there be the strictest sympathy and concert in the action of the corresponding nerves of the two sides. Now in epilepsy the spasms are always more or less *bilateral*, and for this reason, therefore, it may be supposed that they have some special connexion with a nervous center of which one lateral half cannot act without the other.

The appearances after death point also to the *medulla oblongata* as especially concerned in the production of epilepsy. In an early stage of the disorder, we may fail to find any characteristic changes; but, in confirmed cases, the texture is harder than natural, from the interstitial deposit of a minutely-granular albuminous matter, or else softened, swollen, and exhibiting signs of evident fatty degeneration. The posterior half of the *medulla oblongata* is redder and more hyperæmic than it ought to be; and, on examining the blood-vessels in this congested portion, they are found to be of thrice their natural dimensions, and with their walls much thickened and altered—this dilatation and alteration being chiefly in the corpus olivare and in the course of the hypoglossus in the case of epileptics who bite their tongue, and in the course of the roots of the vagus in the case of epileptics who do not bite their tongue.

It is evident, then, that the *medulla oblongata* is especially affected in epilepsy; but it does not follow, as Professor Van der Kolk supposes, that the essential cause of the convulsive affection is to be found in an exalted sensibility and activity of the ganglionic cells of this center.

In favor of this view—that epilepsy is dependent upon exalted sensibility and activity of the ganglionic cells—appeal has been made to the fact of spasms, to the presence of a full, bounding pulse, and to the freedom from attack which is for some time the fruit of an attack, particularly if this has been violent; but the answer is not necessarily that which Professor Van der Kolk supposes it to be. After what has been said about muscular motion in the first lecture, it is not possible to allow that spasm in itself is an argument in favor of exalted sensibility and activity in ganglionic cells. After what has just been said about the phenomena of the circulation in epilepsy, it is impossible to allow that the condition of the circulation favors spasm by bringing about a more active state of the medulla oblongata, (the functional activity of this, as of every other organ, being in direct proportion to the activity of the circulation of *red* blood in the organ;) for it has been seen that the bounding pulse to which reference is made, is filled with *black* blood, and not with red. Nor can the freedom from attack, which is for some time the fruit of an attack, be appealed to as a certain proof that the attack is the sign of the discharge of some overcharge of excitability previously present. On the contrary, it may be argued with some degree of plausibility, from certain facts which have to be mentioned in the next lecture, that the attack was preceded by depression of the circulation and innervation, that the convulsion supervened when this depression had reached a certain point, and that the recurrence of the attack was prevented for a time by the state of reaction in the circulation and innervation, which is a consequence of the convulsion. The case may be one, indeed, of which the history of the rigors of ague may serve as no inapt illustration; for here we have, first, the circulation failing more and more until the bathos of the cold stage is reached; and, secondly, a state of reaction which banishes the rigors most effectually so long as it continues.

It would even seem as if appeal might be made to the appearances after death, and to the actual condition of the circulation in the fit, for positive arguments against the idea of anything approaching to exalted action of the medulla oblongata.

The signs of fatty degeneration can have but one significance—under-action, not over-action. The interstitial deposit, also, implies an equivalent absence of healthy nerve-structure, and so does the dilated condition of the bloodvessels; and this absence of nerve-structure must necessitate a corresponding absence of nervous action. The appearances after death, indeed, if they show anything, show that the medulla oblongata of the epileptic is *damaged in structure*, and because damaged in structure, *weaker in action*, than it ought to be.

The great argument against the idea of anything like over-action of the medulla oblongata in epilepsy, however, is to be found in the state of the circulation; for if, as may safely be assumed, the activity of any organ is in direct relation to the activity of the circulation of *red blood* in that organ, how far from anything like over-action must be the state of things in which as is the case in the epileptic paroxysm, the vessels are at first comparatively empty of red, and afterwards completely filled with black blood?

Nor can the curious discovery of Dr. Brown Sequard, that certain injuries of the spinal cord are followed by an epileptiform affection, be construed into an argument that there is anything like a state of exalted action of the *spinal cord* in epilepsy. This curious result, which is brought about by puncturing or dividing more or less completely almost any part of the spinal cord, is developed, not immediately, but in the course of three or four weeks after the injury. The attacks, once developed, occur spontaneously at various intervals, often several times a day; they may also be brought on by pinching or otherwise irritating the portion of the skin which corresponds to the region of the whiskers in man. The excitable spot is supplied by twigs belonging to the suborbitary, the auriculo-temporalis, the second, and perhaps the third,

cervical nerves; and it is a curious fact, that the irritation which brings on a fit when applied to the skin in which these twigs terminate, has no such effect when applied to the twigs themselves. Any other part of the skin may be pinched or irritated with impunity, but this one spot can scarcely be touched without at once bringing on a fit.

These facts are very curious, and, in the main, very unintelligible: but this much at least is evident, that they do not countenance the idea of any over-action of the spinal cord in epilepsy. The fact that the epileptiform affection does not make its appearance until four or five weeks after the injury would appear to show very clearly that the fits have nothing to do with that local inflammation in the cord which may be supposed to have been set up in the first instance by the injury. After such a lapse of time, indeed, is it not the natural conclusion, that any over-action of the cord, arising from the inflammation produced by the injury must have died out, and left the cord damaged, weakened, under-acting? Nor is a contrary conclusion to be drawn from the excitable condition of the nerves proceeding from the neighborhood of the cheek or cheeks; for both sides of the face are thus affected, if both sides of the spinal cord have been injured. What the full significance of this curious fact may be we may have yet to learn, but at any rate there is no reason to suppose that this excitable condition of the skin implies an over-acting condition of the nerves or nervous centers concerned in the phenomena. The excitable portion of the skin is not over-sensitive, for the animal manifests no signs of uneasiness when it is handled immediately after a fit. Over-sensitiveness, moreover, would seem to have nothing to do with the matter. At any rate, pain, and not convulsion, is the consequence of handling those portions of the skin of the animal which may have been rendered highly hyperæsthetic by the injury to the cord which brought on the convulsions. It is certain, also, that a somewhat similar condition of excitability is brought on when, as in several experiments related in the first lecture *ante*. June-July, the skin is cut off from the full influence of the nervous centers; and hence the natural inference would be, that the action of the nervous centers in the epileptic guinea-pig is *minus* rather *plus*.

As in the former instances, however, so here, we turn to the condition of the circulation and respiration in order to know what is the actual functional condition of the spinal cord in epilepsy; and so turning, we see that the action of the cord under these circumstances must be almost or altogether *nil*. For what action can there be when little or no arterial blood is injected into the vessels?

A similar argument will also dispose of the idea of over-activity of the *ganglia of the sympathetic system* as a cause of epilepsy. It is very possible that the contracted state of the arteries, which is implied by the death-like pallor of the countenance and the comparative pulselessness at the wrist, may show that the coats of the vessels are in a state of spasm; and it is also possible that the cause of this spasm may have to be sought in the sympathetic system; but it does not follow that over-action of this system is this cause. On the contrary, the experiments of Drs. Kussmaul and Tenner, already referred to, show most conclusively that strong epileptiform convulsion is possible when the action of the sympathetic ganglia is entirely suspended by arresting the supply of blood to these organs.

And certainly no opposite conclusion is to be drawn from the vague and undefinable sensations or movements very varying in character, but all comprehended under the term *aura*—sensations of pain, numbness, tingling, or a feeling of cold vapor; movements of shuddering or spasm, beginning in a distant part and traveling towards the head; for the most probable interpretation in these symptoms is that of Dr. Watson—that they are in some degree analogous to the numb and tingling feelings which are the frequent precursors of paralysis and apoplexy, or to the globus of hysteria—phenomena

which by the most perverse process of reasoning can scarcely be supposed to indicate other than a state of defective innervation somewhere.

But, it may be asked, is there nothing else? Is there no peculiar state of the nervous system in epilepsy? Is there no *morbid irritability*? In order to answer this question, it is necessary to ask another—What is morbid irritability? It is not inflammation; it is not fever; it is some indefinable and negative state which occurs frequently in teething, in worm disease, in uterine derangement, and in many other cases—a state in which the patient is unusually depressed by depressing influences, and unusually excited by exciting influences. But what is this state? Is it anything more than mere exhaustion? In difficult teething, the strength is worn away by pain and want of sleep; in worm disease, the parasites help to starve and exhaust the system; in uterine derangement, the health is undermined, in all probability, by pain and by sanguineous or other discharges. In each case there is unequivocal exhaustion of body and mind, and the signs of morbid irritability appear to be nothing more than the signs of such exhaustion. A weak person is more affected by the several agencies which act upon the body from within and from without, and he is so because he is without some of that innate strength which belongs to the strong person; and the person who is morbidly irritable, is, in reality one who, for want of this principle of strength, responds impatiently to the several stimuli, whose office it is to elicit his vital phenomena. In a word, this undue morbid irritability may be nothing else than the natural consequence of that general want of power, the signs of which are written so legibly upon the vascular and nervous system of the epileptic. There is no necessity, then, to look upon this morbid state of irritability as an evidence of the existence of any peculiar condition in some part of the nervous system; for, thus interpreted, it only shows that the state of muscular contraction is ill antagonized by nervous influence. Thus interpreted, indeed, morbid irritability only becomes another name for inefficient innervation.

The *theory of simple epilepsy*, therefore, which may be deduced from a consideration of the facts relating to the nervous system is in harmony with that to which we have been led by a review of the state of the circulation and respiration in the epileptic; and this theory is one which tallies as completely with the view of muscular motion set forth in the first lecture, as it disagrees with that commonly received opinion according to which the muscles are supposed to contract convulsively because they are subjected to excessive stimulation.—*Lancet, Aug.*

(To be continued.)

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### Remarks on a Case of Piarrhæmia accompanying Acute Diabetes Mellitus.

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THE pathology of fatty blood (piarrhæmia, pioxæmia, lipæmia) is still very uncertain. I avail myself of the following case (in itself of much interest) to point out, as nearly as may be, the present landmarks of our knowledge on this subject:—

A. G—, aged twenty-one, was admitted into the Middlesex Hospital on Nov. 3d, 1859, under the care of Dr. Thompson. His history was as follows:—Six months before admission he had married, and, unfortunately, infected his wife with gonorrhœa. The ensuing domestic unhappiness occasioned a separation four months after marriage, *at which time he considered himself in good health*; but the circumstance preyed much upon his mind, and he became dull and low-spirited. *Three weeks* before admission, he first began to suffer from increased thirst, and at the same time noticed that he was voiding an unusual quantity of urine. From this period he had lost strength very rapidly. On admission, he was found to be in a state of alarming prostration, for which stimulants were freely administered, but without any good result. He continued to sink rapidly until the morning of the 5th of Nov., when he died. During his first twenty-four hours in the hospital he had passed five pints and a half of urine, acid, specific gravity 1031, and containing sugar.

*Autopsy, eight hours after death.*—Weather damp. Rigor mortis considerable; body not at all emaciated; diabetic odor perceptible. On the brain being removed, about four ounces of pellucid serum were discovered at the base of the skull. Immediately upon exposure to the air, this fluid became opaque, and its surface was shortly covered with a thin milky pellicle. This was set aside for examination. The blood, as it escaped from the opened sinuses, was fluid, homogeneous, and of a dull-red color, like raspberry cream; but, in a very few seconds, it separated itself into two distinct portions, the supernatant layer being of the color and appearance of thick, white cream, the subjacent presenting the usual appearance of fluid venous blood. For the purpose of further examination, blood was collected from the sinuses of the brain, from the innominate vein and right ventricle, from the hepatic veins, and from the splenic vein. None could be obtained from the portal, nor from the superior mesenteric veins.

These specimens were allowed to repose, and were examined the next morning. The general results were as follows:—

1. With the exception of a very small, non-adherent clot in the right ventricle, the blood was fluid in every part of the body examined.

2. The supernatant creamy fluid was found in every specimen, *except that from the splenic vein*.

Examined under the microscope, it appeared almost perfectly *homogeneous*. It contained *no oil-globules*; no cells, (except a few scattered blood-corpuscles;) and showed no trace of coagulated fibrin. Here and there were a few faint indications of amorphous granular matter, probably molecular albumen (?) *It was wholly taken up by ether*. The exact determination of its quantity was, unfortunately, not attainable; but it may be roughly estimated from the fact that, in a conical test-glass, the creamy layer occupied one-third of the whole.

3. The subjacent layer presented the usual appearance of *fluid venous blood*. Neither in that from the splenic vein, nor in that from any other part, was there the least trace of a clot, even after forty-eight hours. It contained the usual proportion of red and white blood-corpuscles, apparently of a normal character.

4. The reaction of the serum was *neutral*; it had no effect upon the color of blue or of reddened litmus.

5. A volatile alkali was driven off by heat, which restored the color of reddened litmus. This reaction, however, was afforded much more readily by the splenic blood than by any of the other specimens.

The remaining post-mortem appearances were as follows:—The brain (with medulla oblongata) weighed forty-nine ounces and a half. It was pale, and of extremely firm consistence, as though hardened in spirit. Under the microscope, however, its structure appeared to be perfectly normal. The

muscular structure of the heart was of a pale rose-red color. The right ventricle contained a very small, nearly colorless, non-adherent clot. All the valves were healthy. The upper lobe of the right lung contained a mass of crude yellow tubercle as large as an orange; this was surrounded by a distinct layer of pigment, and showed no signs of softening. The left lung was oedematous. The liver weighed sixty-eight ounces and a half; it was of an ashen gray color, and very friable; but microscopic examination showed no other change than an excess of fat in the liver cells. The spleen (three ounces and a half) was small and pale; it contained one dark colored fibrous deposit of the size of a hazel-nut. The mesenteric glands were not enlarged. The kidneys (each six ounces and a half) were large and flabby; the capsules non-adherent; the surface pale, faintly mottled; the structure coarsely striated. The suprarenal capsules were quite healthy.

This seems a well-marked case of diabetes mellitus excited by psychical causes in a person of tuberculous constitution. It is not often that diabetes is distinctly referable to such a cause. Amongst the fifty-one cases recorded by Oppolzer and Heller, (Heller's Archiv., 1852, hft. xi,) *fear* is assigned as the exciting cause in four instances. The extreme rapidity with which the disease ran its course is very remarkable. The ordinary symptoms of diabetes (thirst and polyuria) had existed for only *three weeks*, and that probably in no great degree, as the patient on admission was passing only five pints and a half of urine per diem. It is, of course, probable that the function of the liver had been disordered, and that the disease had been latent, for some time. But even thus it is impossible to assign to it a longer duration than *two months*; for at that period the man considered himself in perfect health. The most rapid case recorded by Oppolzer ran its course in three months. And this extreme rapidity serves to explain why, with such intense prostration, no emaciation was present; for (as we may observe in fever) it takes a much longer time to lose flesh than to lose strength.

The creamy layer which formed on the surface of the blood in this case consisted obviously of free fat, for it was wholly taken up by ether. Such a pellicle on the surface of the *serum* is not uncommon, nor, indeed, wholly abnormal; but it is rare to meet with it, as in this instance, overlying uncoagulated blood. The only similar case, so far as I know, is that recorded by Leubuscher, (in Virchow's Arch., bd. 18, hft. 1, s. 124,) in which it is stated that "a portion of the white serum which stood in a test-glass, *above the red portion of the blood*, was shaken with ether, and almost entirely dissolved."

In both these cases the peculiarity must have been due to the absence of coagulable fibrin. There is on record another case of fatty blood (Lecanu's) in which the fibrin is stated to have been entirely wanting; but no account is given of the appearance of the blood. In this and in some few other points, this case is exceptional. Otherwise, it belongs to the extensive class of cases of "milky serum," under which head it may be more conveniently considered.

L.—The *physical causes* of milky serum are two—free fat, and molecular albumen.

In cases of leucæmia, also, the serum may be lactescent from an excess of colorless blood-corpuscles. But as this appearance is presented only by the *defibrinated serum*, leucæmic blood may be excluded from this inquiry.

A. Free fats. These belong (probably always) to the *saponifiable* group. In one case, indeed (Lecanu's,) *cholesterine* is stated to have been present in the enormous proportion of 108 in 1000 parts. But as the saponifiable fats were also in excess (9 in 1000,) the lactescence of the serum may have been due to these.

The saponifiable fats of the blood (very variable in amount, but which may be roughly estimated at 1 in 1000,) exist in the form of an emulsion with the free alkali of that fluid. Should they, however, be in excess of the emulsive power of the alkali, or should the alkali be (as in certain cases of

disease) deficient, the fat must necessarily appear in a free state, and, on standing, rise like any other cream to the surface.

The form in which it nearly always appears is that of *oil-globules*, as was first noticed by Hewson. In the present case it was perfectly homogeneous; and some similar instances have been observed by Professor Virchow. These are, however, exceptions to the rule.

**B. *Molecular albumen.***—That lactescence of serum is sometimes due to another cause than free fat was first observed by John Hunter; but the fact was ignored or misapprehended until the more recent researches of Simon and Scherer, Buchanan, and R. D. Thomson, placed it beyond question. These chemists found that turbidity of serum was (in some cases) partly occasioned by the presence of a molecular substance, not soluble in ether, but presenting an albuminous reaction. To this substance Simon and Scherer gave, rather hastily, the title of molecular *fibrin*. It is now generally spoken of as molecular albumen.

This substance forms no cream on the surface of the serum, but remains suspended in the fluid, thus rendering it *permanently* opaque, and so readily distinguishable from serum turbid from the presence of free fat *alone*. But frequently the two conditions are combined; the molecular albumen being associated with fat, either in a free state, and so rising to the surface of the turbid serum, or *included* in the substance of the albuminous molecules, from which it may be set free by chemical reagents.

It is, indeed, very questionable whether lactescence of serum is ever due to molecular albumen *alone*. Some cases are, however, recorded by the late Dr. Bostock in which the milky serum is described as containing "no proper oily matter," *although a creamy layer rose to the surface*. It is possible that in these cases the albumen was floated by means of included fat. Another extremely obscure case, but perhaps referable to this category, is one which has been repeatedly, but unaccountably, cited as one of fatty blood. It is known as Caventou's case. In this the blood was permanently opaque; no cream appears to have formed on its surface; it was of neutral reaction, and *coagulable by heat*. A precipitate was thrown down by tincture of galls, but none by Hg. Cl<sub>2</sub> and very little by acids or alcohol. Caustic alkalis produced no effect upon it. The interpretation of this case is certainly difficult; but it seems most probable that the lactescence was due to more than one cause, and that one of the causes was the presence of albumen in some peculiar chemical state.

With these exceptions, molecular albumen appears to be always accompanied by *fatty* disease of the blood.

**II. *Pathology of Milky Serum.***—Milkiess of the serum has been long known, by the researches of Thackrah, Buchanan, R. D. Thomson, and others, to be an ordinary physiological event attendant on the digestion of fatty or amylaceous aliment. Its occurrence during *pregnancy*, also (in which all the formative elements of the blood are increased,) and in the blood of sucking animals, was shown by Mayer; and lactescence of the serum has been found to occur in some animals during hibernation. In all these cases, the milkiess is due both to fat and to molecular albumen. In pregnancy, the white blood-corpuscles are also in excess.

But milkiess of serum has been still longer known as an accompaniment of certain forms of disease. The recorded cases (the earliest of which we owe to the celebrated Robert Boyle) unfortunately do not admit of any accurate numerical analysis, but I believe that the following summary will be found approximatively correct.

(a.) The great bulk of the cases have occurred in connexion either with alcoholism or with diabetes mellitus.

Of alcoholism, nine cases are recorded. To these must be added the *unenumerated* cases of J. Frank.



Of diabetes, seven cases are published (including the present.) To these must be added the *unenumerated* cases of Dr. Babington.

Next in order come *pulmonary diseases*, of which there are six cases on record.

Of albuminuria, *one case* is given by Dr. Christison; "several" are alluded to by Dr. Bostock.

The hæmorrhagic diathesis appears to have been observed in four instances.

Morgagni gives two cases of "malignant fever." The diagnosis in these is not free from doubt.

One case has been observed accompanied by peritonitis; and one by gout. John Hunter saw a case in which fatty blood was taken from a man bled for an injury to the head. This was no doubt an accidental coincidence.

Finally, in seven of the recorded cases, the clinical history is either wholly absent, or too vague to allow of diagnosis. (R. Boyle (3), Traill, Caventou, Mareska, Quevenne.)

(b.) It is observed that in most, if not all, of the cases of *alcoholism*, the lactescence of the serum was occasioned by *free fat alone*.

It would also appear to have been due to the same cause in all Dr. Babington's cases of diabetes, in those of Marcet and Rollo, and in the present instance. Dr. R. D. Thomson saw a case of diabetes in which molecular albumen also was present. Darwin's and Abernethy's cases are uncertain. In Leubuscher's case, lactescence was caused by free fat and an excess of *white blood-corpuscles*.

In the pulmonary group it seems to have been caused by fat alone in four cases. In one (recorded by John Hunter,) albumen was also present; in another (by Mr. Gulliver,) a yellow precipitate *fell* on addition of ether. It is probable that this consisted of albumen previously held in suspension by combined fat.

The cases in which molecular albumen appears to have been present in considerable quantity are these two (of pulmonary disease,) *all the cases of albuminuria* mentioned by Dr. Bostock, the uncertain case recorded by Dr. Traill, and the solitary instance of gout.

(c.) The serum has been analyzed in several cases. Of the analyzes, the most important are those of Traill, Lecanu, Bertazzi, Mareska, and Heller. The general results are as follows:—

a. In one case (Bertazzi's,) the only peculiarity consisted in the presence of an excess of fat (10:1000) at the expense of the other elements of the so-called "extractive." In all the others the *solids* of the serum were in excess, varying from 164:1000 to 206:1000. The normal average proportion, according to Scherer, is 93.4:1000. Notwithstanding this fact, the specific gravity of the serum was *below* the average (1028) in Heller's and in Traill's cases, and apparently in all Dr. Babington's.

b. *Fat* is, of course, in excess in all these cases. It varies from 24.4:1000 (Traill) to 117:1000 (Lecanu.) In this case, however, the enormous excess is made up by 108 parts of cholestrine. The greatest amount of *saponifiable* fat recorded is 50.473:1000 (Heller.)

c. The proportion of *albumen* is not constant. Scherer's average for healthy serum gives 75.2:1000. Bertazzi's case nearly corresponds with this standard. Two cases (Mareska's and Lecanu's) fall *below* it (64:1000.) The other two exceed it very considerably (108.791:1000, Heller; 133.1:1000, Traill.)

d. In two instances, (Mareska's and Caventou's) the reaction of the serum was *acid*. In the present case and in Leubuscher's, it was *neutral*.

In Leubuscher's case, no free  $NH_3$  was extricated from the blood by heat. In the present case a volatile alkali was so liberated, but much more copiously from the splenic than from the hepatic (or *fatty* blood.)

(d.) The fibrin and red corpuscles of the blood have been estimated in only one analysis, (Heller's.) The former amounted to 4.72 : 1000, (about double the average;) the latter to 80.13 : 1000, (the average being 141.1.)

In the present case, in Lecanu's, and apparently in Leubuscher's, there was an almost total deficiency of coagulable fibrin.

In Leubuscher's case the white blood corpuscles are stated to have been in excess.

(f.) Such, I believe, are the principal *facts* ascertained with respect to milkiness of the serum or of the blood, not dependent upon lucæmia.

Briefly, the results are as follows:—

1. Milkiness of serum (or blood) is due to presence of free fat, or of free fat with albumen in a molecular form. It is probably never due to molecular albumen *alone*.

2. It is a *physiological* result of digestion, pregnancy, lactation, and hibernation.

3. It is an occasional *pathological* result of chronic alcoholism, diabetes, mellitus, pulmonary disease, albuminuria, and, perhaps, some other disorders.

4. Lactescence of serum from free fat *alone* appears especially to accompany alcoholism and diabetes mellitus. The conditions favoring the presence of molecular albumen are still very obscure; they appear related in some way to albuminuria.

5. The serum is sometimes neutral and sometimes acid in this disease. It may contain no free alkali.

6. The albumen of the blood may be normal, or defective, or in excess.

7. Coagulable fibrin is *sometimes* entirely absent, or nearly so.

8. In the *present instance* the source of the fat in the blood was the liver.

(g.) Before attempting to construct upon this foundation an hypothesis which may give a probable explanation of fatty blood, it may be worth while to review, very shortly, the few opinions which have been already promulgated upon this subject.

The earlier observers, from Robert Boyle to Hewson, were unanimous in referring "white blood" to the passage into the circulation of unaltered chyle, or even (as Tulpus) of unaltered aliment. This opinion was indeed true, but only half-true; and its insufficiency was demonstrated by Hewson, who observed several cases of diseases, accompanied by milky serum, in which the patients had taken little or no food for several days.

From this period the subject appears to have remained in abeyance, until Caventou's case gave a new and purely chemical turn to the inquiry. In this case the serum had an *acid* reaction; and upon this fact Raspail based an explanation by no means devoid of plausibility. He held that the fat was set free in the blood for the want of a free alkali to hold it in the form of a soap.

This view is obviously true *so far as it goes*; but it seems almost to imply a confusion of cause and effect. Acidity of the blood is, doubtless, capable of setting free all the saponifiable fats normally present in that fluid, (say 1 : 1000;) but it cannot *create* fat. The hypothesis is, therefore, quite inadequate to explain the presence of the large amounts of fat in the blood noted in the previous analyses.

It seems, therefore, far more reasonable to suppose that the excess of fat had exhausted the free alkali of the blood, than that the abstraction of any amount of alkali could have liberated such enormous quantities of fat. This doctrine has, nevertheless, held its ground, and has contributed not a little to the so-called "alkaline" treatment of diabetes mellitus.

The next opinion which I have to notice is that of Dr. Babington, to whom the literature of this subject is so highly indebted. This distinguished observer seems to have been disposed to regard piarrhæmia as a true fatty degeneration of the albumen of the blood, basing his views partly upon the

low specific gravity of the serum in these cases, (which he had been the first to observe,) and partly upon the peculiar case recorded by Caventou, in which it was erroneously supposed that no albumen was present in the blood at all. But it has been already shown, that the *specific gravity* of the serum is no indication of the amount of albumen which it contains; that in Caventou's case, the lactescence, if not due to albumen, was certainly not due merely to fat, and that, in two cases at least, both fat and albumen were present together, and both in large excess. This explanation must, therefore, it seems to me, be abandoned.

Another has been proposed by Rokitansky, also based upon the idea of fatty degeneration. He thinks milky blood due, "in a considerable number of cases," to fatty degeneration of the colorless corpuscles of the blood, previously formed in excess in that fluid. He regards it, therefore, as a modification of leucæmia; and supports his opinion by the statement that milky serum *has been generally observed under circumstances ordinarily accompanied by an excess of white corpuscles.*

This statement, however, seems to require considerable modification, at least so far as regards cases of disease. In one, indeed, (Leubuscher's,) the colorless corpuscles are said to have been in excess; and in four of the earlier cases, that hæmorrhagic tendency was noted which so often accompanies leucæmia. But, with these exceptions, the diseases attended by fatty blood (alcoholism, diabetes, pulmonary disease) are *not* those especially related to leucæmia; and the pathological changes most constantly noted in leucæmia (enlargement of spleen and mesenteric glands,) appear never to have been observed in cases of fatty blood. In the subject of this paper the spleen was remarkably small, and weighed only three ounces and a half. Rokitansky, however, also allows the direct introduction of fat into, and the liberation of combined fat within the blood, to be possible causes of milky serum.

The only remaining opinion which requires notice is that of Virchow, who has treated the subject quite incidentally in a note to his valuable memoir upon Fibrin. He regards milky serum, in pathological cases, as essentially dependent upon the *non-elimination* (non-combustion) of fat, and its consequent accumulation in the blood. The appearance of molecular albumen he appears to consider only a secondary phenomenon; the slow saponification of the excess of fat abstracting from the albumen of the blood the alkali required to keep the latter in solution.

The first half of this explanation is certainly, in many cases, correct. The other involves some difficulty; for, if it be true, it seems impossible to account for the occurrence of large quantities of free fat, in acid or neutral blood, *without* the presence of molecular albumen, as was the case in three of the instances collected above.

The conclusions which I should venture to draw from a comparison of the facts collected in this paper are as follows:—

1. Piarrhæmia consists in an excess of saponifiable fat in the blood, not in the mere liberation of fat from its combinations.
2. The excess of fat in the blood may be the result of two causes—viz:
  - (a) The excessive ingestion of fat (as in piarrhæmia during digestion.)
  - (b) The diminished elimination of the same (as in hybernation and pulmonary diseases.)

It is not quite clear to which of these categories alcoholism belongs. It is *conceivable* that its elements may be *directly* converted into fat by deoxidation: but it seems more probable that the conversion is effected *indirectly*, the hydrocarbon of the alcohol attracting to itself that free oxygen which would otherwise have been employed in the combustion of the fats of the food, and so permitting the accumulation of the latter in the blood.

3. Fat, if directly ingested, may enter the blood with the chyle through the thoracic duct; but it is clear from the present case that it may also be elaborated in, and absorbed directly from, the liver.

4. Piarrhæmia is not a *result* of diabetes mellitus, for either may exist without the other. Both seem to be consequences of the same derangement of the functions of the liver which overloads the blood, sometimes with an excess of sugar alone, sometimes with an excess of sugar and fat combined.

Why the liver should deal so differently in different cases with the hydrocarbons submitted to its influence it is hard to say. It seems not improbable that sugar alone is elaborated in the first instance, and that the excess of fat is the result of a deoxidation of this substance; for the conversion of sugar into fatty substances is not only capable of being effected experimentally (as in the production of butyric acid by fermentation of sugar under the influence of casein,) but has been shown to take place in the animal economy, in the formation of wax by bees fed only on sugar.

5. The pathology of blood milky from molecular albumen must be considered as still almost wholly negative. It is probably never an independent affection; but neither is it a mere accidental consequence of piarrhæmia. Its apparent relation to albuminuria seems to point to some organic change in the constitution of the plasma of the blood itself.—*London Lancet.*

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### Miss Nightingale on Nursing.

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IN regard to ventilation, Miss Nightingale tells us that the fear of open windows is a popular fallacy. The sick-room should be thoroughly aired, for with sufficient covering and hot application a patient can be kept warm in bed while his room is being well ventilated. She writes:—

“You must have open chimneys, open windows or ventilators; no close curtains round your beds; no shutters or curtains to your windows; none of the contrivances by which you undermine your own health or destroy the chances of recovery of the sick.

“The safest atmosphere of all for a patient is a good fire and an open window, excepting in the extremes of temperature.”

She mentions one thing that it were well for all to know and remember, namely, that sick persons generally suffer much more from cold in the morning than in the evening. If they are feverish at night, they are almost always chilly ere daybreak. Yet nurses persist in heating the foot-warmer at night, but neglect it in the morning, when it is most needed.

Having been told by one of the best medical authorities that the air in London is never so good as after ten o'clock P. M., Miss Nightingale is a strong advocate for the admission of night air into the sleeping apartments of the sick. Owing to the absence of smoke and noise, she thinks night much the better time for airing the sick-room.

We find the belief in contagion greatly ridiculed in this manual, the authoress thinking that one is much more liable to be attacked by small-pox, measles, or scarlet fever, from living in a dark, ill-aired, unhealthy house, than from constant intercourse with persons suffering from these diseases. She remarks:—

“How few are there who can intelligently trace disease in their households to such causes! Is it not a fact, when small-pox, etc., appears among the children, the very first thought which occurs is ‘where’ the children can

have caught the disease? And the parents immediately run over in their minds all the families with whom they may have been. They never think of looking at home for the source of the mischief. If a neighbor's child is seized with small-pox, the first question asked is, whether it has been vaccinated. No one would undervalue vaccination; but it becomes of doubtful benefit to society when it leads people to look abroad for the source of evils which exist at home.

"We must not forget what, in ordinary language, is called 'infection,' a thing of which people are generally so afraid that they frequently follow the very practice in regard to it which they ought to avoid. Nothing used to be considered so infectious or contagious as small-pox; and people not very long ago covered up patients with very heavy bedclothes, while they kept up large fires and shut the windows. Small-pox of course, under this regime, is very 'infectious.' People are somewhat wiser now in their management of this disease. They have ventured to cover the patients lightly, and to keep the windows open; and we hear much less of the infection of small-pox than we used to do. But do people in our days act with more wisdom on the subject of infection in fevers, measles, etc., than their forefathers did with small-pox? Does not the popular idea of infection involve that people should take greater care of themselves than of the patient? That, for instance, it is safer not to be too much with the patient, not to attend too much to his wants? Perhaps the best view of duty in attending infectious diseases is afforded by what was very recently the practice, if it is not so even now, in some of the European lazarets, in which the plague-patients used to be condemned to the horrors of filth, overcrowding, and want of ventilation, while the medical attendant was ordered to examine the patient's tongue through an opera-glass, and to toss him a lancet to open his abscesses with.

"True nursing ignores infection, except to prevent it. Cleanliness and fresh air from open windows, with unremitting attention to the patient, are the only defense a true nurse either asks or needs."

Unnecessary noise in the sick-room indicates a thoughtless absence of care, for when a patient is suddenly awakened out of his sleep, the excitement produced is much greater and of a more lasting nature than that which is caused by a continuous sound. Good nursing, however, does not necessarily presuppose an absence of noise; on the contrary, a firm, light step, and a steady, quick hand, are much better than the tip-toe gait and the timid, lingering touch.

Uncertainty and suspense are often more dangerous to the sick than the diseases from which they are suffering, and the delay of a message, or the non-delivery of a letter, have often led to fatal results. Promptness should be considered a *sine qua non* in nursing.

Never hold a whispered conversation about the patient near his room; for, naturally desiring to know the nature of the colloquy, his attention may be strained and his suspicions aroused to feverish and disastrous anxiety.

In feeding a delirious or stupefied person, his attention should first be attracted by the friction of a spoon upon his lips; otherwise, he is liable to suffocation; and the same rule should have a mental application, as speaking suddenly to the sick may produce injurious consequences.

Variety should be an essential element in the sick-room, for none save those who have experienced the feelings can realize what torture it is to lie for weeks in the same room, amid the same surroundings. We should endeavor to make some change rather in the position of light furniture, or by the occasional addition of flowers or paintings.

Miss Nightingale does not admit that cut flowers have any deleterious effects, and says the carbonic acid exhaled from them would not poison a fly.

In impressing upon us the necessity of variety, she writes:—

"Variety of form and brilliancy of color in the objects presented to patients are actual means of recovery.

"But it must be slow variety, *e. g.* if you show a patient ten or twelve engravings successively, ten to one that he does not become cold, or faint, or feverish, or even sick; but hang up opposite him one on each successive day, week, or month, and he will revel in the variety.

"A patient can just as much move his leg when it is fractured, as change his thoughts when no external help from variety is given him. This is, indeed, one of the main sufferings of sickness; just as the fixed posture is one of the main sufferings of the broken limb."

We give the subjoined extracts from the chapter on food:—

"Milk and the preparations from milk are a most important article of food for the sick. Butter is the lightest kind of animal fat, and though it wants the sugar and some of the other elements which there are in milk, yet it is most valuable, both in itself and in enabling the patient to eat more bread. Flour, oats, groats barley, and their kind, are preferable in all their preparations to those of arrow-root, sago, and tapioca. Cream, in many long chronic diseases, is quite irreplaceable by any other article whatever. It seems to act in the same way as beef-tea, and to most it is much easier of digestion than milk. In fact, it seldom disagrees

"Arrow-root is a great dependence of the nurse. As a vehicle for wine and as a restorative quickly prepared, it is all very well. But it is nothing but starch and water. Flour is both more nutritious and less liable to ferment, and is preferable wherever it can be used.

"Nothing has yet been discovered which is a substitute to the patient for his cup of tea. If you give it at five or six o'clock in the morning, he may perhaps get his only two or three hours sleep during the twenty-four. At the same time, you should never give tea or coffee to the sick, as a rule, after five o'clock in the afternoon. Sleeplessness in the early night is from excitement generally, and is increased by tea or coffee; sleeplessness which continues in the early morning is from exhaustion often, and is relieved by tea. Coffee is a better restorative than tea, but a greater impairer of the digestion.

"An almost universal error among nurses is in the bulk of the food, and especially of the drinks they offer to their patients. Suppose a patient ordered four ounces of brandy during the day, how is he to take this if you make it into four pints with diluting it? The same with tea, arrow-root, milk, etc. You have not increased the nourishment by increasing the bulk; you have very likely diminished both, by giving the patient's digestion more to do, and most probably he will leave half of what he has been ordered to take, because he cannot swallow the bulk with which you have invested it."

It will be unnecessary to refer to the remaining chapters, as they contain but little which is not intuitively known to every good nurse; one thing is mentioned, however, which it would be wrong to overlook; namely, the present lamentable style of woman's attire, and the fact of its utterly incapacitating her for nursing. Indeed, men are now much more efficient in the sick-room. The rustling of dresses, and the many little *gaucheries* consequent upon the wearing of crinoline, are most irritating to the sick.

In nursing, every woman should endeavor to wear garments of the most noiseless material, and should ignore hoops altogether.—*North American Medico-Chirurgical Review.*

**DIGITALIS IN DELIRIUM TREMENS.**—Mr. Jones, of Jersey, (Eng.,) reports great success in the treatment of delirium tremens by large doses of the tincture of digitalis. He gives from half ounce to ounce doses, and repeats them frequently; the effect being to quiet the nervous excitement and lower the pulse.

## Communications.

### On the Climate of California in its Relation to the Treatment of Pulmonary Consumption.

BY JAMES BLAKE, M. D., F. R. C. S.

IN my previous article on the subject of phthisis I have shown that both an improved pathology and the result of experience derived from a vast mass of facts, point to the open air plan of treating the disease as that most likely to cure our patients. So strong is my faith derived from my own experience, in its efficacy for curing the disease, that I believe fully 75 per cent. of cases taken in hand in the second stage of the disease, can not only be temporarily relieved, but permanently cured, by a rationally conducted open air plan of treatment, and that at least 50 per cent. of the cases that have advanced to the third stage of the disease, or in which cavities have already begun to form, can be cured, and in nearly all of them can life be prolonged by the same treatment.\* The open air treatment, however, like every other plan of treatment for the cure of disease, has, in order to be successful, to be carried out in a rational manner. There are many obstacles to be overcome, many modifications to be made in it, in order to render it available for the different classes of our consumptive patients. As civilization has advanced, we have departed more and more from the nomadic life of our forefathers, and our social organization as at present constituted, may seem to many to present insurmountable difficulties to carrying out the treatment, particularly when it has to be applied to our female patients. I trust, however, to show that these obstacles can be overcome with much less difficulty than would at first sight be supposed by those accustomed to live only amidst the artificial luxuries and comforts of our in-door glass-window hot-stove civilization, particularly when it can be demonstrated to our consumptive patients that these very luxuries and comforts are dragging them to an early grave, to which they can but serve to smooth the path. Could we have a model climate, that is, one in which the temperature should never fall below 45°, and in which it never rained, the best advice we could give our patients would be to live entirely in the open air, where every breath they would inspire would be taken in, fresh and uncontaminated, from the aerial ocean. Under these conditions, and under these conditions only, can the maximum of that health-restoring influence which is desirable from fresh air, be obtained. But as

\* This estimate, as to the curability of the disease, is far below that which my own limited experience has furnished, but the cases in which the treatment has been carried out, have been too few to justify me in drawing any definite conclusions as to the proportion of cases that can be cured. I would merely state that, in three cases with cavities in the lungs, (in one case on each side,) in which the treatment has been pretty fairly carried out, one case is cured and has remained free from cough during the last two years; another case, in which there were cavities in each lung, now reports himself well, has hardly any cough for the last twelvemonth, and has regained his usual weight; and a third case, a most unpromising one, is much improved, having gained 10 pounds in weight during the last summer, and the cavity having ceased to suppurate.

climates were not specially made for the treatment of consumptive patients, we must do the best we can with them as they are. Even in California, although our climate affords as many facilities for carrying out the open air plan of treatment as any in the world, yet it necessitates us to place our patients occasionally in positions where they are obliged to breathe portions of the same air a second time. Again, a large proportion of our patients are so situated as regards their business, or their means of obtaining a livelihood, that they are unable to completely separate themselves from their affairs, to lead a nomadic life, even during the time that the season would permit of their so doing. Supposing, however, that our patient is in a position to follow our advice fully, and presents himself to us in the second or third stage of the disease, before too large a portion of the lung is completely disorganized, or the strength too far exhausted. My advice to him is, between the months of May and October, immediately to assume the nomadic life; to get on horseback with a pack mule and with a companion that can hunt, break away for some part of the coast range, where he can command an elevation of two or three thousand feet, and where game is plenty. It signifies little to what part of the range he directs his steps, or he may choose the Sierra, if more convenient. I consider, however, the coast range preferable, for many reasons. The climate there is more agreeable; the heat of the day is not so great, nor are the nights so cold early and late in the summer as on the higher hills of the Sierra. Game is much more abundant on the coast range than on the Sierra, and a good and wholesome nourishment can thus be more readily obtained. Another advantage that the coast range has over the Sierra is, that our patients, when once they are well up in the coast range, have not such facilities for rushing back to the "*flesh-pots of Egypt*" as they have in the Sierra, with most parts of which there is daily stage communications with the valleys. It is a great advantage for them to be obliged to stay out, but it requires much strength of mind, or some pretty steep barriers, to prevent a man who has a family from seizing the first opportunity afforded by a partial return of health, from revisiting his home, or for a man who is in business, from satisfying himself as to the way in which his affairs are being carried on. I have seen much mischief done by these too frequent visits to home, particularly in the case of married men, who the more they are away from their wives the better. I consider that, during the summer months, our patients in this latitude will find the best climate at an elevation of from two to four thousand feet above the level of the sea. The lower elevation is the best in early summer and autumn, and can be borne by patients whose lungs are considerably diseased, whilst the higher elevation will suit those in whom the third stage has not made much progress. There is an opinion generally prevalent amongst the members of the profession, that phthisical patients do better at lower levels, on account of the air not being so much rarified, and therefore requiring a less respiratory effort to obtain the same amount of oxygen. My experience is entirely opposed to this idea of high elevations not suiting phthisical patients, as is also that of many other physicians who have practiced in mountainous regions. Except in cases in which a considerable portion of both lungs is diseased, I believe that the additional expansion required to obtain the necessary supply of oxygen, may even be beneficial. But we have a far more important reason for sending our patients to the mountains than that afforded by any problematical advantage to be gained by this additional expansion of the lung, and this is, in the decided superiority of the mountain air over that of the valleys, for invigorating the digestive organs. There can be no comparison between the two climates in this respect, and as phthisis is to be attacked and cured through these organs, a mountain climate is always to be preferred. There cannot be a more striking instance of the impunity, as regards the respiratory organs, with which great elevations can be borne by phthisis.



ical patients, than is furnished by Dr. Smith, of Lima, in an article "On the Climate of Peru," in the 18th Vol. of the *British and Foreign Medico-Chirurgical Review*. After stating the symptoms of the second stage of phthisis, as generally seen in that country, Dr. Smith observes: "No Lima junta of experienced native, or well acclimated European physicians, would for a moment hesitate to order to the Sierra a patient in the condition I have just described. They would deem this transfer of climate, as the only security for the patient. Under such conditions I have witnessed the application of all approved European remedies of every school fully tried, where the phthisical patient was, for one reason or another, destined to run his course on the coast and in the capital, under the eye of able assistants, but always with the same fatal termination."

In answer to the query as to the best localities for the treatment of phthisis, he observes: "On the Pacific slope of the Cordillera, and by the Pasco road from Lima, Haraway and Canta are considered the best localities, but Canta above all, on this route, is allowed to be the most desirable, being about twenty-five leagues from Lima, and at an elevation of 10,000 feet. Again by the Zarza road from Lima, Matucana and San Mateo are favorable climates—the former, according to McLean, is 8,026, and the latter 10,984 feet high." After this it is quite useless for us to prevent our patients seeking a mountain climate, for fear of rarified air. In our latitude a much less elevation will suffice to ensure a good digestive climate than in a country so near the Equator as is Peru. The great desideratum is, to find a climate where the digestive organs can recuperate, and the lungs, if not very far gone, can afford to go and seek it at elevations of 10,000 feet, if necessary. When phthisis was looked upon simply as a disease of the lungs, and its pathology was sought solely in the changes taking place in these organs, it is not surprising that physicians should hesitate to send their patients to elevations, where the diseased organ should have more work to perform. But now that more correct views prevail as to the cause of the disease, there can be no longer any excuse for us preventing our patients from seeking the best localities for their recovery, by migrating to the mountains.

There is another advantage possessed by our mountain climates, as compared with that of the valleys, which is, that during the warmer summer months the diurnal variations are less than in the valleys. When residing at Iowa Hill, at an elevation of about 4,000 feet, I found, on comparing my meteorological register with that kept by Dr. Hatch, in Sacramento, that when the thermometer in the valley would fall 16° to 20° between sunset and sunrise, it would only fall 10° to 14° at Iowa Hill; nor would the temperature reach so high a point during the day—the daily range of temperature being 10° to 12° less at the higher station than at the lower. Another great advantage that our patients have by residing in the mountains during the summer months is, that they avoid malaria. The extraordinary opinion that once prevailed, as to the antagonism between malarious disease and phthisis, is now fortunately exploded. Amongst the vast mass of medical fallacies that have been at different times advanced, it would be difficult to find one with less foundation. According to my experience, malaria is extremely prejudicial to phthisical patients. They are very liable to be affected by it, and its effects are amongst the most unfortunate complications that can interfere with the cure. These effects are seldom seen in the form of regular intermittent. They generally assume some irregular type, so that it is frequently difficult to refer them to their true cause.

I trust these facts and considerations will suffice to convince the profession that a mountain climate, at least such as we possess in the coast range and the Sierra, affords the most favorable localities in which a phthisical patient can pass the summer and autumn months. Cases sometimes present themselves in which elevations above one or two thousand feet cannot be

borne without oppression; they are, however, rare, and are, I think, depending on some asthmatic affection. During the winter our patients, where practicable, may derive benefit from a trip to the Sandwich Islands, provided they do not suffer too much from sea-sickness. The months of December and January can be thus well spent, and these months are undoubtedly the worst months in the year for consumptive patients in California. If they make the voyage, let them not remain on the Islands; the benefit is to be derived from the voyage, not from a residence on the Islands, where the moist, warm atmosphere is not calculated to improve the digestive organs. It is by a dry, bracing atmosphere that these are usually invigorated, although a sea-voyage, in an atmosphere almost saturated with humidity, often exerts a favorable influence in restoring the digestive functions. It is only on the sea, however, or on the coast, that such an atmosphere can be borne with impunity; as soon as we get inland, humidity is undoubtedly prejudicial, so that the benefit to be derived from a sea-voyage must be sought for in some other element of the sea-air, besides its moisture. Should it not be desirable, however, for our patients to leave the State, Los Angeles, Santa Cruz, or San Diego, are good localities for passing the winter, or even the lower hills of the Sierra or coast range. At an elevation of a few hundred feet the sea of fog that frequently fills the valleys for days together during the months of December and January, seldom rises, and our patients can thus secure many days of bright sunshine, which in the valleys would have to be passed in a cold, bone-searching fog. During the months of February, March and April, San Francisco, or the inland valleys, afford about as good localities for our patients as any in the State; there is no fog, no dust, no malaria, and the climate is more equable than that of the mountains at the same season.

SACRAMENTO, Dec. 12th, 1860.

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### On the Treatment of Delirium Tremens by Large Doses of Digitalis.

BY JAMES BLAKE, M. D.

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IN a recent number (Sept. 29th,) of the *London Med. Times and Gazette*, there is a paper by Mr. Jones, of Jersey, on the treatment of delirium tremens by large doses of digitalis. The medicine was administered in half ounce doses, and repeated every three or four hours until sleep was produced. The results of this treatment were such as to lead me to give it a trial on a patient in the County Hospital, and it certainly produced beneficial effects more rapidly and pleasantly than any other medicine I had ever administered.

The following is the case:—J. L., æt. 40, was admitted into the County Hospital November 10th. At the time of his admission he was much excited, having been drinking hard for many days; he was constantly talking to himself, and very restless; states that he had not slept for four or five nights; pulse weak; skin clammy and cool; tongue much loaded; stomach

irritable. Wishing to try the effect of digitalis on him, I merely ordered some bismuth and a mustard poultice to the stomach, wishing to have an opportunity to watch the case for twenty-four hours before administering the medicine. At night, however, he was so excessively violent, disturbing the whole hospital by his cries, that the hospital assistant gave him a grain and a half of morphia. This quieted him somewhat, and he is said to have had a little sleep. The next morning, however, he was as wild and excited as before, and towards evening he had two epileptic fits, at intervals of half an hour. Stupor lasted but a few minutes, and when he recovered his consciousness he was as wild as ever. I now gave him half an ounce of the tincture of digitalis, and in a quarter of an hour he was in a tranquil sleep, and this lasted for three hours, when he awoke on my feeling his pulse; he was, however, much more calm and rational; the pulse was fuller, and 90; skin warmer. Says he feels cold in his inside. Ordered that he should take another half ounce of the tincture in an hour should his restlessness and hallucinations return. The second dose was administered at 10 P. M., or about five hours after he had taken the first. He was again asleep in half an hour, and rested quietly until morning. I found him then quite comfortable; rational; pulse 90, and good; skin warm; appetite returning; complains of a feeling of cold in his inside. During the day his bowels were freely purged, and as towards night he showed some symptoms of returning excitement, two drachms more of the tincture were given, and from that time every symptom of the disease vanished, and he left the hospital in five days perfectly restored to health. In another case, five ounces of tincture of digitalis were given in three days by Dr. Montgomery to a patient laboring under a very bad attack of delirium tremens, and although sleep was not produced, yet no ill effects followed, and the case recovered most rapidly after one or two doses of morphine.

Mr. Jones, in commenting on his cases, observes:

"I have never seen any alarming symptoms follow the use of these large doses of digitalis. The only case I have lost since adopting this treatment had a tumor in the brain. In three only was other treatment adopted after digitalis had failed to procure sleep; in other words, in sixty-seven out of seventy cases, digitalis was the only medicine used, and sixty-six of these patients recovered. . . . I trust that this narrative of the results of my experience may induce others to follow what I believe to be a very valuable practical lesson, but I must warn those that do so, not to try, as I have done, any smaller doses than those I have recommended. They would not only lose valuable time, but I believe would be doing harm."

It is possible that the failure of the medicine to produce sleep in the patient above alluded to, who took five ounces of the tincture, was owing to the neglect of this caution, as for some time the medicine was only administered in two drachm doses. The case, however, affords an interesting example of the impunity with which large quantities of digitalis can be taken.

SACRAMENTO, Dec. 12th, 1860.

## Editor's Table.

**ANÆSTHETICS.**—Alcohol, ether, amelyne and chloroform, act directly upon the nervous centers, destroying sensation and the power of producing motion (which the French call *motricité*—motricity) in the spinal cord. These are the true anæsthetics, and are not known, necessarily, to impair any of the functions of the body after its recovery from their immediate effects. On the other hand, the pseudo-anæsthetics are carbonic acid, and oxide of carbon, which produce complete anæsthesia of sensation and motion only at the moment of death. They produce the phenomena of anæsthesia imperfectly only by suspending the hematose, turning the blood black in the arteries as well as veins, and thus causing diminution of sensation and motion *pari passu* with the diminution of life: complete anæsthesia, by these agents, and death, occur at the same instant. For the demonstration of these facts the profession is indebted first to M. Flourens, (1847,) then MM. Lallemand, Perrin and Duroy, (1860.)

**THE METROPOLIS.**—During the current month there seems to have been still less sickness than the preceding. Affections of the respiratory organs still constitute the principal cause of complaint. There have been a few sporadic cases of scarlatina, no genuine diphtheria, but many cases of ulcerative tonsillitis attended with severe constitutional symptoms of from two to four days duration. The surgical portion of the profession will watch the closing year with easy consciences, as this month, there have not to our knowledge been any "successful surgical operations" under which patients have expired. To-day (Dec. 19,) our city is deluged with rain, and our streets are canals of standing mud. In rainy days, this is the muddiest city, of its size, in the world; but a single day of sunshine and all is changed: our thousand hill-side streets are dry, and the mud is no where found except in the comparatively few level streets. Mud has something to do with the health of a city, when it is so deep as it is here, that nearly all the crossings are submerged.

We were not able to get the *exact* reports of mortality for the past year, but proximately (and these figures are not fifty out of the way,) there have been 2300 deaths from Jan. 1st to Dec. 20th, 1860.

**RECEIVED.**—We have received from Messrs. Sumner & Cutter, the Arguments of J. P. Benjamin and Reverdy Johnson in the New Almaden case, the same having been reported phonographically by Messrs. S. & C. with that accuracy for which they are distinguished. These great arguments occupy between four and five hundred octavo pages..

**DR. TOLAND** made a resection of the clavicle, for caries of that bone in a case, male, æt. 35, affected with specific disease. He also excised the bones of the right wrist in another case of caries, on the 18th inst. We will note the result hereafter.

DR. STAUB, of this city, removed a small sequestrum, last week, from the lower jaw, at the maxillary symphysis, in a young lady, aged 16. The disease was supposed to have been caused by a fall on the chin two years ago.

WE trepanned the right frontal eminence, on the 9th inst., in a male child, aged five years, in consequence of fracture of the skull at that point, and compression shown by facial and lingual paralysis and strabismus. These accidents promptly disappeared as soon as the fractured portion of the inner table was raised to its normal level. The child is rapidly recovering, and the lost bone in being replaced by new osseous formation.

ON THE UNION OF SENSOR WITH MOTOR NERVES, AND THE RESULT OF SUCH UNION.—Studies by Dr. Ambrosoli, late anatomist at the Royal University of Pavia.—[Translation in abstract.]—Gluge and Thiernesse, in a memoir inserted in the *Bulletin of the Royal Academy of Brussels*, (Vol. VII, 1859,) give in detail the experiments they performed on the lingual and hypoglossal nerves of dogs, the final results of which are as follows:

1. The galvanic current applied to the central extremity of the divided lingual nerve, does not cause the least contraction in the tongue. But if instead of this, it be applied to the cicatrix resulting from the reunion of this nerve after division, and to the peripheral branch of the hypoglossal, the muscles of the tongue visibly contract.

2. In the cicatrix there is formed a nerve tissue which on microscopic examination exhibits nerve tubes with minute cylinders, perfectly developed.

3. The sensitive fibres cannot be transformed into motor fibres.

4. The organic motion in the nerve fibre which induces sensation, must be different from that which induces muscular contraction.

[Apropos, we find the following in July number of *Brit. and For. Med. Chir. Rev.*, p. 176.]

"Gluge and Thiernesse have experimented on the obscure subject of the union of the sensitive nervous fibres with the motor fibres. The authors mention the previous experiments by Flourens, Schwann, Muller, and Bidder, relating to the same question, and then describe ten experiments of their own performed on dogs. The nerves selected were the hypoglossus and the lingual branch of the fifth pair; after the section of these nerves, the central end of the lingual nerve was fixed to the peripheric end of the hypoglossus, and in the greater number of the experiments the central end of the hypoglossus was shortened by a considerable piece, in order to avoid complication in the interpretation of the results. In general this operation was performed on both sides of the head, with an interval of from three to five weeks between the two operations. The first operation rarely caused any important derangement, while the second was followed by great difficulty in swallowing and masticating; the faculty of lapping was destroyed; the tongue became to some degree atrophied and contracted towards the bottom of the mouth; ulcers were regularly formed on the margins of the tongue, but healed again within some weeks. About three weeks after the operation, the central portion of the lingual—i. e., the sensitive nerve, was firmly connected with the peripheric portion of the hypoglossus—i. e., motor nerve; in the cicatrix nerve-fibres were perceived extending from the lingualis to the hypoglossus. Galvanic irritation applied to the central portion of the lingual nerve did not cause contractions in the tongue, except in one experiment, which the authors themselves consider as devoid of value on account of the nerve not having been sufficiently isolated during the experiment. The same irritation applied to the peripheric or central end of the hypoglossus, or to

the cicatrix, caused decided contractions in the tongue. The central portion of the hypoglossus terminated in a swollen stump, from which emanated nerve-fibres, towards the peripheric part of the hypoglossus or the cicatrix, or of the adjacent muscles, but never towards the lingualis. The authors infer from these results: 1. That sensitive fibres cannot be transformed into motor fibres; 2. That the organic movement ("le mouvement organique,") in the nerve-fibres affecting sensation must be different from that causing muscular contraction. It may be mentioned that Gluge and Thiernesse, in their just-mentioned experiments, witnessed the irritability of the nerve-fibres separated from their centers, to persist during four and even four and a half months."

And now, having recapitulated the history of the researches made upon the union of nerves of different nature, in as faithful a manner as I am able I will relate in detail those of my experiments which had the best results, that I may suggest those few corollaries which seem to me directly deducible from them.

1. After having properly tied a robust dog, I exposed the lingual and hypoglossal nerves. I then cut them, and reunited by a point of suture the *central end of the lingual to the peripheral end of the hypoglossal*. The operation was performed on the right side. After four months the animal was killed, the nerves being first exposed, that they might be examined while the animal was dying; the cicatrization of the two ends was complete; the galvanic current applied to the central end of the lingual nerve, did not produce the least contraction of the tongue; applied to the cicatrix, in the vicinity of the peripheral portion of the hypoglossal, there occurred some feeble contractions; there was strong contraction when the current was applied to the peripheral extremity of the hypoglossal; pinching the cicatrix with a forceps in that part of it corresponding to the lingual end, caused the animal to exhibit signs of pain; the portion of the cicatrix corresponding with the peripheral end of the hypoglossal irritated by merely mechanical means, excited lingual contractions. These manipulations have been equally successful in other experiments.

The microscopical examination of the cicatrix, which was of a grayish color and somewhat tumefied, showed the presence of connective tissue, and in the midst of this, a few nerve fibres of new formation, which were fusiform and reunited at their extremities; none of these fibres were completely developed.

[After the detailed narration of four more similar experiments, Dr. Ambrosoli concludes in the following words:]

It is not then true, (scientifically) as Gluge and Thiernesse assert, (Gluge and Thiernesse: *On the Union of Sensitive Nerve Fibres with Motor Fibres*,) that nerves isolated from the cerebro-spinal axis, maintain their excitability for many months. The maximum duration of this property is four days according to *Longet*; less, according to my experiments. These authors have perhaps confused the movements which occur in the tongue from irritation of the hypoglossal, some weeks after it has been cut, with the paralytic oscillations observed by *Schiff*, which are so marked in the organ of taste, and so readily confounded with movements produced by irritation of the nerves. But the duration of the excitability is subject to many variations, which depend upon the nerves upon the animals experimented upon, and upon the peculiar conditions of the latter at the time, as I have had occasion to demonstrate in a previous paper.

And now, summing up the most important points in the present paper, in my opinion the following conclusions are established:

1. The motor nerves may be united to the sensitive by means of nervous tissue of new formation; the complete development of the nerve fibre which

constitutes the new formation is not completed in less than four months, yet the cicatrix uniting the two ends seems complete in a less space of time, but it still consists for the most part of condensed connective tissue and a few fusiform fibres.

2. The reunion of two nerves of different nature by means of new nerve fibre, does not induce, as a consequence, the change of their functions, but the two ends joined together retain unaltered their sensorio-motor property.

3. In the cut ends of the nerves, and in the cicatrix uniting these ends, new nerve tissue is formed which possesses the faculty of making the muscles contract.

4. If the peripheral ends of the sensitive or motor nerves remain isolated, either because a portion has been removed for the purpose of study, or because from any cause whatever, the reunion to the central end of a motor or sensitive nerve, within a few days they lose definitively their property, and after three months or a little more become completely degenerated.

[For the sake of having this important assertion, which is the result of experiment, better appreciated, we here insert a paragraph from the *American Med. Times* of Nov. 3d, translated from the *Gazette Hebdomadaire* of Sept. 14th, 1860. It will be seen this is diametrically opposite from the statement of the distinguished Italian.—ED. P. M. and S. Jour.]

"*Regeneration of Nerves*.—MM. Vulpian and Philippeaux have communicated some of the results of their researches on the regeneration of nerves after injury, in which they state that the peripheral portions of nerves, after having been completely separated by section or excision of a portion from the centres, may yet recover their physiological properties and normal structure, even after having undergone entire change, and this without any previous union taking place between the cut ends. They therefore conclude that it is not necessary for the maintenance of the normal structure of nerves that they should be in intimate connexion with the nervous centres, and that motor force and sensation are not "borrowed forces" derived by the nerves from the central nervous system, but are rather *properties of tissue*, dependent on the integrity of the nutrition and structure of the nervous tubes. The alteration which takes place in the tubes when the nerves are cut, they state to be limited mostly to the disappearance of the medullary substance, which reappears when they are restored to their healthy state, but the steps in this process of restoration are not fully made out."

Towards the eighth day (continues the Italian experimenter,) the matter contained in the nerve tubes begins to be transformed into fat globules, which progressing, assume various dimensions; on the fiftieth day these globules are completely developed, the nerve tubes reduced solely to their envelope become transparent; towards the third month they present the appearance of a fasciculus of fibres of cellular tissue.

5. The degeneration commences in the peripheral ends when we attempt to unite them with the central ends of the same or of a different nature, but stops when after a week or two the nerves thus united become firmly soldered together by the new formation; if some fibre should chance to become partially degenerated, it is reproduced.

6. The nutrition of the cranial and spinal nerves is subordinate to the medulla oblongata and medulla spinalis. But we ought to notice that in early life the nutrition of the nerves is more independent, because the nervous vegetative foci (*foculi vegetative dei nervi*) described by Schiff, are very numerous in young animals.

7. Nervous effects must originate exclusively in the centers where the nerves have their origin, and in the organs to which the nerves are distributed, not from any peculiar organization of the nerves themselves.

8. If galvanism be applied, in an animal just killed, to the peripheral end of a motor nerve which has for many months been perfectly isolated

from the cerebro-spinal axis, movements of the muscles succeed which are the paralytic *oscillations* described by Schiff, most clearly apparent in the organ of taste. These depend upon the suspension of the circulation of the blood caused by death, and have nothing to do with the movements produced by irritation of the nerves. Therefore, those who interpreting such movements for nervous effects, have supposed the regeneration of isolated nerves, and thence the persistence of their property. And this accounts for the discrepancy among authors concerning the duration of excitability of nerves isolated from the cerebro-spinal axis.

If this paper has not the merit of originality, still it may possess interest as the faithful result of what I have seen, and because it peremptorily settles many questions upon which the opinion of experimentors has hitherto been in suspense.

Finally, I have the satisfaction of knowing that I am the first Italian who has applied himself to this question, which will hereafter be of importance in the study of the pathology of the nervous system.

**ZOOSPERMES OF THE FROG**—*Concerning their vitality, and the transplantation of the testicles of one animal to another. Memoir which received a prize from the Academy at Brussels, by Dr. Paolo Mantegazza.* [Translated from the Italian of the *Bulletino delle Scienze Mediche*, June, 1860.]—Zoospermes are histological elements which claim the attention of the naturalist and physiologist on account of their singular form, and of the independent manner of life with which they seem endowed, and also for the important part they perform in the great mystery of generation. If hitherto none has been able to surprise nature in the mysterious act of conception, if it is not yet known where the life of these little microscopic creatures culminates, still considerable light may be thrown upon this very obscure subject by studying how they comport with chemical and physical agents, and it may also be possible to determine with precision whether they only possess a motion impressed upon them by the organism which has formed them, or whether they may be considered as very small animal entities which, formed in a living animal, are still endowed with a peculiar and independent life which permits them to fulfill the important functions for which they were made. The examples here presented are only the beginning of a long series of experiments and observations which I have instituted upon the zoospermes of animals, and especially upon those of man. These are yet very incomplete, but I have thought it best to publish them as they are, because some of the facts I think I have verified in the course of my observations, may induce other physiologists to extend the sphere of this department of study, and thus the journey to the domain of truth will be the sooner accomplished. Those engaged in extending the boundaries of science, should give each other the hand and communicate each acquisition as soon as it is made. Any idea whatever, by the simple process of passing from one brain to another, is fecundated and developed, and with the increment and vitalizing of ideas, science progresses, and the vanity of the individual is converted into a noble ambition.

The zoospermes of the frog are well known to micrographists and naturalists. I shall not repeat facts found in all the books, which, while it would merely serve to exhibit my erudition, would encumber my work with a mass of literature tiring to the patience of the observer, who never has any time to spare from the study of the great book of nature; *longa via est propera*.

[The following is our abstract from the Italian, of the conclusions of Mantegazza.—Ed.]

Conclusions from the first part of the experiments upon the zoospermes of the frog :—



1. The zoospermes of the frog will live in any temperature from 13.75 deg. minus, up to 43.75 deg. plus, [centigrade.]

2. They will survive four consecutive freezings and thawings. They die after the fourth freezing only after a long struggle with the cold.

3. They live for some time in a liquid sufficiently putrid for the development of infusoriæ.

4. They outlive the frog to which they belong a period varying from twelve hours to seven and a half days.

5. They live in a barometric vacuum.

6. They live excellently in the blood, in the mucus of the mouth, and in the urine of the frog.

7. They subsist in human sperm, and in the water which frogs frequent.

8. They are killed by the gastric juice of the frog, phosphorated oil, alcohol, tincture of *coca*, acetic and sulphuric acids, by a solution of the ferrocyanate of potassium, and by chloroform.

7. Zoospermes live longer when left in the body than when the testicles are removed, the surrounding conditions of temperature and humidity being equal.

10. The individual constitution of the frog exercises a greater influence on the vitality of the zoosperme than the kind of death to which the frog is submitted.

For example: two frogs equally robust, of the same age, killed at the same time by the destruction of the medulla spinalis, furnished zoospermes: those from one lived eighty-three hours and fifteen minutes; those from the other possessed more vitality, for they lived ninety-four hours and fifty-six minutes.

Three frogs killed by submergion presented these very different results as to the vitality of the zoospermes:

- |    |                  |            |
|----|------------------|------------|
| 1. | Zoospermes lived | 172 hours. |
| 2. | "                | " 157 "    |
| 3. | "                | " 135 "    |

There is observed a still greater difference in the frogs which die spontaneously, for in these, upon autopsy, the zoospermes will almost always be found living.

Submergion in water which kills the healthy frog in nineteen hours, aids the vitality of the zoospermes, and those thus submerged resist death longer than others.

From all these observations we can form an idea of the tenacity of vitality in these histological elements. They resist the temperature of Senegal, and may be frozen and thawed four times in succession, without dying; up to a certain point they resist putrefaction, and have no need of atmospheric air for the maintenance of life.

The organs which constitute the microcosm of an animal mechanism are not merely portions closely connected by anatomical and physiological relations to the individual to which they belong, but they have also by their structure and the purpose to which they are destined, an individuality which gives them a kind of automatic life. If the many facts already acquired by the conquests of science had not proved the physiological fact, it would be demonstrated with perfect clearness by the brilliant experiments of M. Ollier upon the transplantation of periosteum. Still farther the experiments I am about to relate prove that an organ, very complex in its anatomical structure and of great importance, in consequence of the function it fulfills in the organism, may be transplanted from one animal to another, and may continue to live in the new soil by its own peculiar life for an indeterminate period.

Mantegazza now proceeds to give the details of fifty-seven experiments, in each of which he transplants a testicle of a frog to the body of another frog, male or female, either under the skin of the abdomen or thigh, and in

almost all of them the transplantation was successful; that is, the testicle adhered to the tissues into which it was engrafted, and its zoospermes were found living at the expiration of various periods, the longest of which was 1650 hours, or more than two months and a quarter. The testicle in many of these cases became very vascular in its new location, and surrounded with a vascular envelope, through the medium of which it partook of the circulation of the blood of the animal into which it had been engrafted.

Signore Mantegazza says in conclusion of this second part of his researches—These experiments prove that an organ, as complex as the testicle, may be transplanted from one individual to another, and live in the new organism for the space of seventy days. If it were possible to protract the life of frogs thus prepared, still longer, by keeping them in ample and congenial reservoirs, we should doubtless observe phenomena still more important, because a gland would necessarily form for itself an excretory canal, and perhaps this gland thus perfectly engrafted might modify to a certain point the instincts of the animal into which it had been transplanted.

In the fourteenth and fifty-seventh experiments, it will be seen there was formed in each a true permeable tube or duct in the vicinity of the testicle, but not having had the good fortune to see zoospermes issue from these ducts, I must for the present be contented to merely note the fact, leaving to future researches the choice of perfecting the observation.

Notwithstanding the close attention bestowed, I was not able to catch the instant in which the small tumor which precedes the opening of the duct upon the surface of the skin, ruptured, in consequence of which I must for the present remain in doubt whether there was not an issue of true sperm at that moment, and whether the excretion was not arrested in consequence of the very bad conditions as to nutrition in which the frogs were placed.

To throw some light on this most obscure point, says Mantegazza, I will borrow from doctor *Udlikem*, the fact observed by *Wagner*, who extirpated the testicle of a cock while it was yet a chicken, and re-engrafted it into the same bird, but in another part of the body, and found that when the cock became grown it had the crest and the crow like other full grown roosters. But *Schwann*, repeating the same experiment, found on the other hand that the transplanted testicle was by degrees absorbed, and the cock operated upon became a capon.

The transplanted testicle lives several days in the new organism without attaching itself to any point, and I have often moved the testicle about under the skin for a period of two weeks, to break up its adhesions and prevent their formation, and thus preserve the testicle isolated under the teguments. In these cases the organ lived by endosmosis. Somewhat later the testicle flattened into a gelatinous stratum, which constitutes a sort of membranous skin, and becomes fixed at some point of the new organism, getting into communication by new bloodvessels with the nutrient circulation of the frog. By its continued presence, it may form a small excavation in the muscles under which it has been placed. When we have found the testicle adherent, we have not considered it necessary to resort to injection, or to a fine dissection, to become convinced that the testicle had become a part of the new body for the naked eye, or, at most, the eye aided by a loop clearly perceived many bloodvessels surrounding the testicle and communicating with the organism.

The testicle lives in the female organism as well as in the male, in the cavity of the belly as well as under the skin of the abdomen, or thigh or back.

[For the complete original essay of which this is a mere abstract, see *Gaz. Med. Lomb.*, No. 26 et seq. July 1860.—Ed. P. M. & S Jour.]

## Books Received.

**LECTURES ON THE DISEASES OF INFANCY AND CHILDHOOD.** By Charles West, M.D., Author of "Lectures on the Diseases of Women;" Fellow of the Royal College of Physicians: Examiner in Midwifery at the Royal College of Surgeons of England: Physician to the Hospital for sick Children: Physician-Accoucheur to, and Lecturer on Midwifery, at St. Bartholomew's Hospital. Third American, from the Fourth revised and enlarged London edition. Philadelphia: Blanchard & Lea 1860.

THE name of this author has been too long and honorably known to make any comment on a work that appears over his signature necessary. This is by no means a formidable book. It is written in colloquial style, in plain straightforward English, without any of the grandiloquent ranting which so much impairs the merit of a learned and otherwise very meritorious work on the same subject, by a distinguished American physician. We do not believe in Mr. West's blis ers, and calomel, and opium, in the diseases of children, to a tithe of the extent he recommends them. We find this suggestion in Lecture XXIX:

"Opiates in various forms, and for various purposes, may be needed to check diarrhœa, or to relieve suffering; and you must not allow any preconceived notion of the danger of employing opium in infantile diseases to prevent your having recourse to so valuable a medicine."

There is no man living, who has had more opportunity for observing diseases of children, or who has entered into the examination of their treatment with more feeling, earnestness and intelligence, than the illustrious M. Trousseau, therefore, as an "argument to the man," his opinion is good as an offset to that of Mr. West. M. Trousseau everywhere condemns its use in infants at the breast. He says he has known a single drop of laudanum plunge an infant into a state of stupefaction for forty-eight hours. He thinks there is no uniform ratio in the effect of a given dose on an infant at the breast, and on one that has passed the first years of life. He does not prescribe opium to children, that are yet sucking infants. Mr. West does not take this broad distinction into consideration.

We give below a sample at random of Mr. West's style and doctrine: he is speaking of rules for the use of antiphlogistics in children: he says "venesection in the arm is hardly ever possible before the age of three years, but that in cases of extreme urgency the jugular vein may be opened," but generally depletion should be performed by leeches: he then gives excellent directions for the application of these animals, and finally sums up on depletion in children in the following words:

"1st. It should be remembered that large losses of blood are worse borne by the child than by the adult; that if syncope is produced, its effects do not pass away so speedily, but leave a much more abiding depression.

"2d. That the shock consequent on large losses of blood, shows itself, not merely by causing syncope, but also, not very seldom, by producing convulsions, and such convulsions are specially apt to be excited in cases where the previous disorder of the nervous system was considerable, even though such a disorder depended on congestion of the brain which called for depletion to relieve it. It seems in these cases, as in some of comparatively slight disease

of the heart, in which, if the equilibrium of the circulation is suddenly disturbed, it altogether fails to recover itself. A child of ten months old was brought to me many years ago with symptoms of cerebral congestion—a hot head, a raised fontanelle, a burning skin, and twitchings of the tendons of the arms and legs. I ordered leeches to the head, which drew freely; but the convulsions, which it was hoped they would ward off, occurred while the bleeding was still going on, and the child sank at once into a state of coma, from which it never rallied completely, and died in the course of forty-eight hours. Now, in this case, the abstraction of blood was indicated, and the appearances discovered after death showed that the depletion had not been excessive. It had, however, been too sudden; and probably, had I been present when the leeches were applied, I should have noticed some change in the child's condition which would have warned me to put a stop to further bleeding, and might thus have led to an entirely different result. In proportion, therefore, to the youth of our patient, must be our caution in ordering free depletion, and our care in watching its effects, and these must both be greater when marked disorder of the nervous system forms the indication for our treatment.

"3d. Not only are very large losses of blood hazardous, and great shock by its too sudden abstraction, also attended with danger in early infancy, but repeated bleedings are also inexpedient. The system rallies from them with proportionately far greater difficulty than in the adult, and that peculiar class of symptoms, by which exhaustion is apt to stimulate congestion of the brain, are specially likely to be induced. It may be added that, to a considerable degree, the same caution holds good with reference to all other antiphlogistic remedies; that free purgation, spare diet, and depressing measures of all kinds, though often requisite, yet require most heedful watching, and generally need to be soon discontinued."

Concerning antiphlogistics he says:

"Among antiphlogistic remedies, the two which in the child, as in the adult, are of the greatest value and of the most general application in the treatment of acute inflammatory diseases, are antimony and preparations of mercury. Both, however, are not infrequently used in cases where they are either not needed, or are positively injurious.

"The peculiar influence of mercury is exerted too slowly to control the first rapid advance of some acute diseases, such as croup and pneumonia, though in both after previous depletion, and the administration of antimony, mercury often proves more serviceable. In those forms of pulmonary inflammation, also, which sometimes occur in comparatively weakly subjects, or in which the disease has already advanced unchecked so far as to produce consolidation of the lungs, it is on mercury that our chief reliance must be placed. Mercury, too, is our great stay in all cases of acute inflammation of the serous membranes of the chest and abdomen, and in severe inflammation of the mucous membrane of the large intestine or dysentery, the disease often admits of control by no other means than by the conjoint employment of calomel and opium.

"In cachectic diseases its utility is far more limited. The earlier symptoms of congenital syphilis yield rapidly to the employment of small doses of mercury; but the tertiary results of the disease are often aggravated, very seldom indeed benefitted, by that medicine. In the majority of disorders connected with the tubercular diathesis mercurials are not beneficial; and in tubercular hydrocephalus in particular, in which they are so often given, I never saw even momentary improvement from them, apart from their occasional action as purgatives. It must, however, be confessed that, in their powerlessness to control this disease, they do but stand on the same footing with all other medicines. There is one class of ailments too connected with tuberculosis in which the action of mercury is almost uniformly beneficial;

and that is tubercular peritonitis, and those vague disorders of the functions of nutrition so commonly referred to disease of the mesenteric glands.

"In administering mercury to infants and young children, it must be borne in mind that evidence of the system being affected by it is seldom afforded, as in the adult, by the occurrence of salivation. So rare indeed is mercurial stomatitis in early life, that I have never yet seen an instance of it in a dangerous form, very rarely indeed have met with it in such a degree as to be troublesome; and should therefore regard the production of gangrene of the mouth by the administration of mercury, as an evidence of some rare idiosyncrasy on the part of the patient, rather than of want of due care on that of the doctor. In early life, mercury, instead of affecting the mouth, usually, acts very speedily as an irritant on the intestinal canal; and the green stools, which are often looked on with satisfaction as a proof of the system being brought under the influence of the medicine, are far from always having that meaning. They prove its action as a local irritant, a result which may be most undesirable, and which often compels us to diminish its dose, sometimes even completely to suspend its administration. Sometimes, too, calomel acts as an irritant on the mucous membrane of the stomach, producing nausea and vomiting, and giving rise to so great a degree of depression as to necessitate its discontinuance.

"Besides its use in those more formidable diseases to which reference has hitherto been made, mercury is also often employed as a purgative and alterative. There is no doubt but that used with either of these objects it is a remedy of great value, and the objection to its employment is, not that it fails to accomplish these ends, but that it answers them at a greater expense of constitutional power than was necessary. Rhubarb, soda, the mineral acids, aloetic preparations, the taraxacum, and other remedies, exert an alterative power over the secretions, without any of that depressing influence which attends the use of mercurials. In the same manner, there are many purgatives no less certain, and no less speedy in exciting the action of the bowels, so that, before prescribing calomel or gray powder, the practitioner ought to be satisfied that there is some special end, in producing an increased secretion of bile, in controlling an excited state of the circulation, or in rapidly modifying the condition of the intestinal mucous membrane, which no other remedy would attain, or at any rate would not attain so certainly or so quickly."

It will be seen that Mr. West is oblivious of the new theory said to be demonstrated by a hundred consecutive experiments, that mercury *does not increase the secretion of bile*, but on the other hand diminishes it.

This work will be eagerly sought by the profession of this coast as a most valuable addition to the literature and knowledge of the diseases of children. For sale by A. Roman, San Francisco.

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**THE PRINCIPLES AND PRACTICE OF MODERN SURGERY.** By Robert Druitt, Licentiate of the Royal College of Physicians, etc., London. A new and revised American, from the Eighth Enlarged and Improved London Edition. With four hundred and thirty-two illustrations. Philadelphia: Blanchard and Lea. 1860. For sale by A. Roman, 127 Montgomery street.

THE merits of this edition over the preceding editions of this work are very fairly stated by Mr. Druitt himself in his preface, as follows:

"In the chapter on Inflammation, which is entirely new, I have endeavored to present the facts in a modern practical guise, stripped of the formal old Hunterian phraseology. Pyæmia and Phlegmasia Dolens are removed from the chapter on the Veins, and are treated of in their natural alliance with Erysipelas and diffused Inflammation. Due notice has been taken of

the use and abuse of Caustics in the treatment of Cancer. The arrangement of the Chapters on Injuries has been altered, so as to give due prominence to the comparative safety of Subcutaneous Injuries. The whole chapter on Gun-shot Wounds has been written afresh and very much enlarged, from materials kindly placed at my disposal by Mr. George Lawson. The chapter on the Eye has, again been most kindly revised by Mr. Haynes Walton, whom I have, besides, to thank for the materials for a section on the Ophthalmoscope. The treatment of Anchylosis by forcible extension; and of Syphilis by fumigation; the recent improvements in Ovariectomy, and in the treatment of Vesico-vaginal Fistula; the radical cure of Hernia; and the subject of chloroform and the too frequent deadly results of its administration, may be mentioned as having received special addition or improvement: whilst in the last chapter I have taken pains to bring into small compass the latest and best information on Excision of the Knee-Joint. It will indeed be a reproach to surgeons, if this humane and rational operation shall be discontinued on the plea of want of success or large mortality resulting."

This work is too well and favorably known to require any commendation.

**STATISTICAL REPORT ON THE SICKNESS AND MORTALITY IN THE ARMY OF THE UNITED STATES.** Compiled from the Records of the Surgeon General's office; embracing a Period of Five Years, from January, 1855, to January, 1860. Prepared under the direction of Brevet Brigadier General Thomas Lawson, Surgeon General United States Army. By Richard H. Coolidge, M.D., Assistant Surgeon U. S. Army. Washington: George W. Bowman, Printer. 1860.

THIS is a quarto Senate document, full of interest concerning the various military departments of the country. The reports of the different Surgeons and assistant Surgeons, include descriptions, often in eloquent diction, of the location of their respective posts and surrounding scenery, and habits of the people or natives in the adjacent regions, so that the Report is not merely interesting to the government, the politician and statistician, but to every one who is interested in the prosperity of the Republic.

The following passage taken from the Report of Assist Surgeon Charles C. Keeney, of Fort Jones, is interesting in a democratic point of view:

"It is a notorious fact that when females from the Atlantic States arrive on this coast, those who have been barren for years, and those who have never borne children at all, no sooner become acclimated than the uterine organs assume a new tone, and conception immediately follows. This change of the uterine functions is not temporary, but continuous, and the once sterile female may calculate with the greatest certainty that the end of every eighteen months will bring an offspring.

"The American cow, after reaching this coast from the plains, will bring a calf every ten or eleven months, and this calf will bring forth young when two years old. Sheep breed twice a year, and more frequently bring forth two at each birth than one. Swine have five litters in two years.

"If I were to advance an opinion of my own on this great procreative tendency of both man and beast on this coast, I would attribute it in a great measure to this bland and stimulating climate. The climate has certainly the effect, on females who come here, of producing an immoderate action of the catamenial functions; and on man, of arousing his dormant venereal propensities. But I will not attempt to offer any further cause for this, but will leave it for the more scientific."

It has never been unknown to the profession that a mild, temperate, and somewhat uniform climate is favorable to the multiplication of both animals and men. There is nothing in this respect peculiar to the climate of California:

the same result would occur if people from the north of Europe should migrate to the shores of the Caspian or the Mediterranean, or from the south of Chili to the sunny vales of Peru, and the great plains of Brazil.

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**ON THE THEORY AND PRACTICE OF MIDWIFERY.** By Fleetwood Churchill, M.D., M.R.L.A., etc. With additions by D. Francis Condie, M.D., etc. With one hundred and ninety-four illustrations. A new American, from the Fourth corrected and enlarged English edition. Philadelphia: Blanchard and Lea. 1860. For sale by A. Roman, 127 Montgomery Street, San Francisco.

THE title page of this book bearing two names already justly illustrious in our profession, the one in Europe, the other in America, is a sufficient guaranty of its merits. One is not likely to go far wrong in following such leaders. But one should carefully study authorities and then do as he pleases, under the guidance of his conscience and educated judgment: if he lack the latter qualification, (every one has some notion of his own deficiencies) he would do well to follow such leaders as Churchill and Condie, without taxing much his own genius.

Genius sometimes takes the place of knowledge, and when not deterred by the obstacle of principle can accomplish unheard of things. To physicians naturally thus endowed authorities are of no value.

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**THE ANATOMY AND PHYSIOLOGY OF THE PLACENTA.** The Connection of the Nervous Centers of Animal and Organic Life. By John O'Reilly, M.D., etc. New York: Hall, Clayton & Co., Printers, 46 Pine Street. 1860.

THE author of this monograph has rare intellectual faculties, but if judged by this production only, they are in a state of chaos, to arrange which into form, order, and the system required in the treatment of subjects which depend for their whole interest on inexorable facts, would require three years of close mathematical and logical training. He writes with an impetuosity that might be expected of one who is hurrying to finish, no, not finish, but end a sentence in a given and very limited time. A patient in *extremis*, has sent for him in mad haste, and with one bold dash he achieves the end of his sentence, regardless of sense or of syntax. For your own fame, brother, take breath, and write in a manner worthy a close thinking medical philosopher, which the present work shows you might become. This work is vastly entertaining and worth twice its cost! It is gilded with gold outside, and streaked with lightning inside.

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**A PRACTICAL TREATISE ON THE DISEASES OF THE LUNGS.** Including the Principles of Physical Diagnosis. By Walter Hayle Walshe, M.D., Professor of the Royal College of Physicians, etc. A new American from the Third revised and much enlarged English edition. Philadelphia: Blanchard and Lea. 1860. For sale by A. Roman, 127 Montgomery Street.

THIS is an elegant quarto of nearly 800 pages, and is an unusually excellent work. It is excellent for its brevity, for its logical accuracy, for its truth to nature, for its reliance on observation and experiment rather than theory and deduction, excellent for the entertaining colloquial diction in which much of it is expressed, and finally, excellent for its reliability as to its original statement of facts. We do not believe there are copies enough in this city to supply the demand that will arise for it as soon as its merits are known. At a future time we shall have more to say of this book.









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